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Full Name of Author — Nom complet de l'auteur

DORIS SHIRLEY BURGHARDT

Date of Birth — Date de naissance

Aug 29 1937

Country of Birth — Lieu de naissance

CANADA

Permanent Address — Résidence fixe

4515 - 38B Ave. Edmonton

Title of Thesis — Titre de la thèse

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DR LEN STOWIN

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A CRITIQUE AND REPLICATION OF SEX-ROLE STEREOTYPES AND CLINICAL JUDGEMENTS OF MENTAL HEALTH"

by

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A THESIS

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(Signed) Doris Burghardt

PERMANENT ADDRESS: 3917 - 115A St.
Edmonton, Alberta.

DATED January 13 1982

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled A Critique and Replication of "Sex-Role Stereotypes and Clinical Judgements of Mental Health,"

submitted by Doris Burghardt

in partial fulfilment of the requirements for the degree of Master of Education

in Educational Psychology.

.....
Supervisor

.....

.....

Date December 18, 1981

ABSTRACT

The study, "Sex-Role Stereotypes and Clinical Judgements of Mental Health" by Broverman et al. (1970), has been widely accepted by writers in the area of sex-role stereotyping. A critical look at this study revealed numerous flaws in the experimental design and statistical analysis. A replication of the Broverman study was undertaken using a sample drawn from the psychologists, psychiatrists, and social workers practicing in Alberta. Contrary to the conclusions of the Broverman study, the replication found the descriptions of females were similar to the descriptions of adults as often as were the descriptions of males. Though the descriptions of males and females did differ in the culturally expected directions, the magnitude of the differences did not support the charges of sex-role stereotyping made by Broverman et al. (1970).

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CHAPTER I

INTRODUCTION

One of the most commonly cited studies in the sex-bias literature is a study that appeared in the Journal of Consulting and Clinical Psychology in 1970, by Inge Broverman, Donald Broverman, Frank Clarkson, Paul Rosenkrantz and Susan Vogel, entitled "Sex-Role Stereotyping and Clinical Judgements of Mental Health." The study is generally seen as evidence that professionals in the mental health field - psychiatrists, social workers, and psychologists - expect women to conform to a sex-role stereotype and that they base their professional judgement of women's mental health on a sex-role stereotype. Supporters of this view claim that women cannot avoid being seen as less healthy than men because the female sex-role stereotype has fewer healthy traits in it than the male. The study is also used as support for various writers' beliefs that clinicians expect women to be passive, submissive, dependent, illogical, etc.

As will be shown in Chapter II, the study was found to be extremely influential and used as the basis for some rather sweeping statements about the behaviour of therapists. In fact, it was so well accepted that few critical comments and only one critical review of it could be found (Stricker, 1977). Given the apparent pervasiveness of the notion that mental health professionals view women as

less healthy than men, and given the paucity of evidence upon which it is based, it seemed appropriate to re-examine the question.

A careful examination of the 1970 study showed its dependency on a 1968 study by Paul Rosenkrantz, Susan Vogel, Helen Bee, Inge Broverman and Donald Broverman, essentially the same research team, and entitled "Sex-Role Stereotypes and Self-Concepts in College Students." Therefore a critical appraisal of both studies was included in this paper.

A search for replications of the 1970 study for corroboration of Broverman's results revealed that those researchers, who used some of the same questionnaire items and a similar experimental design, varied so many other factors that their results could neither clearly support nor detract from the original findings.

The present study was proposed as a replication of the Broverman et al. (1970) study. The instrumentation and design followed the original as closely as possible, and the scoring and statistical analysis followed the original in as far as it was possible to do so. The population sampled in the present study was the psychiatrists, social workers, and psychologists registered to practice in the Province of Alberta on January, 1981.

The objective of the study was to carry out a critical analysis and replication of the Broverman et al. study.

CHAPTER II

REVIEW OF THE LITERATURE

Part 1: A Review of Rosenkrantz et al. (1968) and Broverman et al. (1970)

From the references cited by the authors, it appeared that the Broverman and the Rosenkrantz studies grew out of research done in the later forties and in the fifties. Fernberger (1948) found that college students stereotyped men and women and McKee and Sherriffs (1959) examining sex-role stereotyping in the self-concepts of college students, found that female students assigned themselves more unfavorable traits than did males. Komarovsky (1950) suggested that the stereotyped dependency of women was functionally linked to the social structure and encouraged by society.

Several studies looked at the positive and negative values of various traits. Cowen (1953) had students rate traits for social desirability, and two studies by separate groups of researchers, who like Inge Broverman worked in a hospital setting, found the social desirability ratings of traits were similar to clinical judgements of these same traits by psychiatrists, social workers and psychologists (Kogan, Quinn, Ax & Ripley, 1957; Wiener, Blumberg, Segman & Cooper, 1959).

In 1968, Seward and Larson published an article on the sex-role stereotypes and self-concepts of adolescents. They

used bipolar items and a seven-point scale and, as one part of their study, compared adolescents' concepts of mothers and fathers, and of men and women. They reported that men were seen as more "socially intrusive" and scored higher on competitiveness and bravery than did women.

The immediate forerunner and conceptual basis for the Broverman (1970) study was by Rosenkrantz et al. (1968). While this study had obvious similiarities to the studies by McKee and Sherriffs (1959) and Seward and Larson (1968), it produced a much more extensive result. Forty-one bipolar and unipolar questionnaire items were found to be sex-role stereotypic on the basis of the subjects' responses. The poles of these items were also labeled as masculine or feminine and as socially valued or not valued.

The first problem of the present study is to look at the evidential basis for the categorizing of traits in the Rosenkrantz study and the bases for the broader conclusions reached by the authors of the Broverman study.

Rosenkrantz et al. (1968) asked two classes of college undergraduates to list behaviors and personality characteristics that differentiated men and women. Any item that appeared more than once was included on a questionnairein a bipolar form. Most items were really only unipolar items with left and right-hand descriptors. In this way, 122 items were developed. In the questionnaire they appeared with poles separated by 60 points as shown in the following example:

Not at all aggressive Very aggressive

1.....2.....3.....4.....5.....6.....7

The subjects were 154 college students, 74 men and 80 women. They were asked to "mark on the instrument the extent to which they expected each item to characterize" the adult male and then the adult female (p. 288). An additional instruction which asked them to describe themselves was related only to the question of self concept and is not pertinent to this review.

The mean scores were calculated on each item for the description of a man and for the description of a woman by the male and female subjects separately. Inspection of the means was used to determine which direction represented "masculinity" and which "femininity." For example, if the mean rating for an adult male was 5.3 and for an adult female it was 4.9, then the right-hand side of the scale was tentatively called the masculine end, and the left-hand side was tentatively called the feminine end. A 75% level of agreement was chosen as the definition for stereotyping. Each person's response to a particular scale was examined, and if the order in which they placed adult male and adult female was the same as the order of the means, they were said to agree. For example if they rated an adult male at 3.2 and an adult female at 2.6, they would agree with the directionality of the scale. On 41 of the items there was agreement among 75% of the male subjects and 75% of the female subjects on which direction was characteristic of

masculinity and which of femininity. For both groups the differences between the mean responses for masculinity and femininity on each item were found to be significant beyond .001. In comparing the responses to items made by men and women, correlations of item means were calculated separately for descriptions of adult male and adult female. The correlations of .96 and .95 indicated that there was substantial agreement between men and women in the average ratings they gave. The male and female subject groups were pooled and their combined responses to the 41 "stereotypic" items became the data base for the study.

However at this point, a critical look at how the items were designed and how the responses were interpreted revealed weaknesses which seriously diminished the support the data gave the conclusions drawn by Rosenkrantz et al. A basic problem was that the authors incorrectly assumed that their questionnaire items were all bipolar. Bipolarity of items implies that the scale goes in both directions, with some mid-point which is defined as either lack of either characteristic, or equal amounts of both characteristics. The mid-point is the origin of the scale, or the zero point. Subjects would have to mark men and women on different sides of the mid-point to indicate different characteristics for them. Marks on the same side of the mid-point would indicate only differing amounts of the same trait.

Most of the items, contrary to the researchers claims, were unipolar. Twenty-seven of the 38 "stereotypic" items

that became a permanent part of the questionnaire were unipolar. For example, on the item, "Not at all aggressive--Very aggressive," the zero point, or the point indicating none of the trait, is at the left-hand pole. All points to the right of (1) indicate varying amounts of aggressivity.

The mixing of unipolar and bipolar items may have caused the subjects some confusion. This will be discussed in the section on mid-point responses in Chapter V. But even more critical at this point, it created problems in the researchers' interpretations of results. The two types of items require two different interpretations of responses as shown above, yet no such distinction was made in the Rosenkrantz study. A single interpretation was used for all items. Of the two descriptions, the response that was to the left of the other was taken to represent the trait described by the left-hand pole, and the response to the right of the two, was taken as meaning the trait at the right-hand pole.

The result, on the unipolar items, was that differences of degree were interpreted as absolute differences. Men needed only to be described by a higher degree of aggressivity than women, for example the ratings could be (1.9) and (1.8) respectively, for men to be labeled "Aggressive" (Rosenkrantz, p. 291, Table 4). Thus while neither men nor women were actually rated as aggressive in the absolute sense, men were labeled as aggressive and women by implica-

tion as not aggressive.*

On the bipolar items, a rating on one side of the mid-point could be interpreted as if it were on the opposite side. For example, on the item "Very subjective--Very objective," men and women could be rated in the "subjective" range, at 2.1 and 2.4 for example, yet men were labeled "objective," and women by implication "subjective " (Stricker, 1977, p. 17).

The authors would have been on safer grounds if, instead of talking about traits or about "poles," they had talked about tendencies or directions. The study claims to show that "sex-role stereotypes continue to be clearly defined" (p. 293). However, the source of this "clear definition" is the researchers' interpretation, not the subjects' responses. The decision to report the descriptions of men and women in terms of absolutes was made by the researchers not by the subjects. Unfortunately the later uses to which this study was put stressed the absolute nature of these descriptions.

In the second part of the study, 73 men and 48 women (population unstated) were asked to indicate which pole of each item represented the more socially desirable behaviour. The proportion of subjects that chose the masculine pole was called the SD score for that item. The

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*When these same data were presented in the table of male and female traits in the Broverman et al. (1970) study, men were labeled as "Very aggressive," and women as "Not at all aggressive" (see Table 1).

mean SD score for female subjects across the 113 items scored was not statistically different from the mean SD for male subjects. SD scores for the two subject groups also correlated .964 over the 113 items. Therefore, the two subject groups were pooled. Only the 41 "stereotypic" items appeared to have been used for the remainder of the analysis.

The researchers then decided whether the "masculine" or the "feminine" pole of each item was valued on the basis of its SD score. The pole chosen more often by the subjects as the socially desirable one became the "valued" pole. There was no mention that any criterion, such as 75 per cent agreement formerly used for "stereotypic" items, was used to establish that one pole had been chosen over the other.

Rosenkrantz et al. found that 29 items were "male-valued," that is the masculine pole was considered more socially desirable, and 12 items were "female-valued" (see Table 1). From this they concluded that, "Both men and women agree that a greater number of characteristics and behaviours stereotypically associated with masculinity are socially desirable than those [sic] associated with femininity" (p. 293). This was one of the clearest and most precise statements of the authors' findings found in the study.

They also wanted to determine which was more valued masculinity or femininity. For this part of the analysis they used the mean SD score of the 41 "stereotypic" items:

> To ascertain whether masculinity is more valued than femininity, the mean SD score of the masculine pole on the 41 stereotypic items (.650) was tested against the proportion expected by chance (.500). The difference was found to be significant ($\underline{t}$=2.83, $\underline{p}$ <.02, $\underline{df}$=40. (p. 290)*

It seemed unnecessary to use a complex statistic to make this comparison. A very large factor in the mean SD score was the number of male-valued items. Since we already knew that 29 out of 41 items, or 70% were male-valued, could a mean SD score of .65 tell us anything more? Nonetheless, Rosenkrantz et al. concluded, on the basis of that $\underline{t}$ test, that there was a "greater valuation placed upon masculinity."

In the last and most confusing section, an attempt was made to compare the social desirability of the male-valued and female-valued traits. The authors wanted to see which were the more highly valued. However, the only data they had gave the choices of favoured poles from between the two poles of the same item. There was no data ranking items or choosing between items. The only other data available were derived from 35 male college students using a 60-point scale to indicate optimum trait levels. One possible speculation was that the authors compared social desirability by equating either a high degree of consensus on an item, or a high level of a trait reported as optimum, with a high

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*This is an inappropriate use of a $\underline{t}$ test since there is no reason to suppose that the item means behave like independent observations.

social value being placed on that trait.* The authors reported only that they compared "mean SD score" (we are not told from what data) for the male-valued traits and the female-valued items, and that the resultant t score was not significant. They concluded that male-valued traits were not more highly valued, but that masculinity was more highly valued than femininity because there were more of the male-valued traits.

The overriding weakness in the results presented in the Rosenkrantz study was a lack of stated criteria for most of the labeling that was done. Because the subjects' responses were presented only in combined form, there was no way to know what degree of confidence to place in the distinctness of the categories established by the authors.

One criticism of their interpretation of the data, was that the researchers appeared to assume that the entire universe of traits was represented by the 41 "stereotypic" items. In other words, that men and women were mainly defined by these "stereotypic" traits. In fact, the traits were pre-selected to discriminate between men and women. Since the researchers did not attempt to establish that the traits were representative of all traits that apply to men and women, the key problem remained one of generalizability.

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*McKee and Sherriffs (1959) invoked Marbe's Law: it is unlikely that subjects will all select an item if they do not feel strongly about that item. However, in the Rosenkrantz study, subjects did not select certain items to respond to but were asked to respond to all items.

Indeed the results may have been different if all the behaviors and personality characteristics listed at the beginning stage had been used. There was no justification presented for generalizing from the findings based on this select group of traits, to the complete picture presented by real men and women (Stricker, 1977, p. 17).

An even more serious problem is that by basing their conclusions on the notion that there were more male-valued traits, they were implicitly assuming that each of the 29 male-valued items was equivalent to each of the 12 female-valued items. Supposing, however, that all of the 29 male items were synonymous traits, or highly related traits and the 12 female traits were relatively independent. Then one would argue that most of the domain spanned by the items is female-valued. Of course, such a supposition seems highly unlikely, but the point is that these data cannot be used to provide answers to the question of whether or not male traits are more valued that female traits, or whether masculinity is more valued than femininity.

In summary, Rosenkrantz et al., concluded that college men and women hold "clearly defined" stereotypes of men and women. They also found that there were a larger number of desirable traits that were masculine than feminine. However, this critique suggested that (a) the definition of the traits in extreme forms must be attributed to the authors of the study and not to the subjects, (b) there is no evidence presented to support the idea of "clearly defined" stereo-

types, and (c) there may be more masculine traits than feminine traits that are valued in the group of 41 items that were analysed in the study, but this finding is not necessarily true for the universe of masculine and feminine traits, nor indeed for masculinity and femininity.

Broverman et al. (1970) proposed to study sex-role stereotyping by psychologists, psychiatrists and social workers. The instrument they used, the Broverman Sex-Role Questionaire (BSRQ),was a modified version of the Rosenkrantz Stereotypic Questionnaire. Two changes were made: (a) of the original 122 items, 7 were rejected and replaced, (only 38 stereotypic items remained) and (b) the 60 point scale was dropped and only one or the other of the polar extremes could be chosen by the subjects.

There was very little information in the study about the population studied or the sampling techniques used by Broverman et al. We know that the sample included 79 psychologists, psychiatrists and social workers. Of these 46 were men and 33 were women, and the age span was from 23 to 55 years. The social workers and psychologists had a minimum of a master's degree and 31 of the men and 18 women had either a Ph.D. or a M.D.

A telephone call to Inge Broverman ellicited the following information. The sampling method used was to send copies of the BSRQ and the special instructions along with graduating students of Inge Broverman. These students went to various states but primarily the northeast, the south

and the southwestern United States. The former students persuaded fellow workers to respond to the questionaire and the results were returned to the Broverman group. The sample obtained in this way contained few psychiatrists,and the largest group represented were psychologists.*

Three different sets of instructions were provided along with the BSRQ. Subjects were all told that they were being asked to participate in a study of "notions of mental health among mental health professionals."* The first group, 17 men and 10 women , was asked to "think of normal, adult men and then indicate on each item the pole to which a mature, healthy, socially competent adult man would be closer." The second group, 14 men and 12 women, was asked to describe a "mature, healthy, socially competent adult person." The subjects were all asked to "look at opposing poles of each item in terms of directions rather than extremes of behaviour" (p. 2).

Only 38 stereotypic items were analysed and mean agreement scores were computed for each set of instructions. The proportion of subjects choosing the more popular pole of each item was averaged across items for the male, female, and adult profiles. The reported mean agreement scores were highest for the adult profile at .866. Next came the profile of masculinity at .831 and then femininity at .753. Broverman et al. concluded from this that clinicians "strongly

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*Inge Broverman, Personal communication, October 14, 1980.

agree" in their descriptions of a healthy man, woman and adult. It should be noted, however, that what the clincicians were agreeing on, was not the descriptions per se, but rather the "directions."

An adult "health profile" was established in the following way: the pole of each item chosen by the greater number of clinicians to describe adults was designated the "healthy" pole, and the profile generated became the absolute standard of mental health. The clinicians reversed the choices of the college students on four items. They chose "Does not hide emotions at all," "Very emotional," "Not at all religious," and "Very little need for security." The college students had chosen the opposite poles of these items. (For the social desirability or valuing section of their study, Rosenkrantz et al, dropped the 60-point scale and used dichotomous scoring).

The adult "health profile" was used as the key for obtaining "health scores." The scores for men and women were the proportions of clinicians who chose the same pole as was used in the adult profile. Unfortunately no item results were reported, and only "mean health scores" for men and women were reported.

Broverman et al. reported a "mean health score" of .827 for "masculinity" and of .747 for "femininity." To compare these scores, they used a t test ($t=2.16$, $p<.05$) which is again invalid since we do not know that the proportions for each item are independent. They concluded

that, "despite massive agreement about the health dimension per se, men and women appear to be located at significantly different points along this well-defined dimension of health" (p. 5).

The first problem with their conclusion is their use of the term "health dimension." In fact, the .827 and .747 are not points on a continuum of health, but rather proportions of a set of 38 traits. As was discussed earlier, these 38 traits were not even chosen to represent mental health, but to differentiate between men and women. And even more significantly, this conclusion by Broverman et al., implies that these 38 traits define the entire space of mental health. Supposing that there are 500 more bipolar traits that relate to mental health, it is conceivable that, using the same experimental design, "femininity" could have received a mean of .81 and "masculinity" a mean of .79. We simply do not know what the proportions would be if the entire domain of mental health traits were used. And we do not know if clinicians regard healthy adult females as more or less mentally healthy than healthy adult males unless we ask them.

Secondly, since the test was made up of 29 male-valued items out of the total of 38, should we not ask why was the absolute difference in "mean health scores" so small? In fact these statistics suggested the possibility that clinicians see men and women as quite similar. The differences in health scores could be accounted for by the differences in agreement scores between the male and female profiles.

By averaging the scores across all items the authors obscured rather than clarified the differences in the clinicians descriptions of men, women and adults. We were not told if the clinicians agreed with the college students' choices of masculine and feminine poles, and we do not know if their choices of poles met the criterion of "stereotypic." The only data reported were the "mean health scores."

A closer look at the "mean health scores" shows that the masculine-feminine difference in proportion was about .08. Now in a group of 26 people rating a set of items, each rater can influence the proportion by at most .04. Thus, the observed difference could be produced by two 'maverick' raters in the two groups. For example, two people choosing poles for adult females opposite to the majority of the other raters, or two in the male group behaving in this way, or one in each group going against the popular choices. In any event, the differences found by Broverman et al. can be attributable to two out of 52 raters--hardly an overwhelming indictment even if all the other problems of the study were not present.

To reiterate, one of the authors' major conclusions--that "clinicians have different concepts of health for men and women"--stands upon the dubious supposition that (a) the 38 traits span the space of mental health, and (b) these traits are equally independent and can be counted up to arrive at a mental health rating. The assignment of "masculinity and "femininity" to opposite poles was a carryover from

the Rosenkrantz study, and not based upon the clinicians' responses in the Broverman study.

The 38 traits are presented in table form in Broverman et al. and in a slightly adapted form as Table I in this study. In this study the table has been changed to include the choices of "healthy" poles made by the clinicians. The table has an anomalous position in the Broverman study since it appears to present results of that study while it based entirely upon Rosenkrantz et al. (1968). The valued items are those selected as socially desirable by the college students (in four cases these do not agree with the clinicians' choices). In addition, no selection of male and female poles was established in the Broverman study, so the designations must be from Rosenkrantz et al.

The table in itself creates a misleading impression in the Broverman study. The very listing of the male-valued and female-valued traits offers the reader a seemingly easy way of incorporating the results of ths study. Some authors as will be seen in the second part of this chapter, read the table and not the whole study. Furthermore, there is no justification for Broverman et al. including it in their study since it contains no information generated in their 1970 study.

TABLE 1

BROVERMAN"S TABLE OF MASCULINE, FEMININE AND VALUED POLES
BASED UPON THE CHOICES OF COLLEGE STUDENTS IN ROSENKRANTZ ET AL. (1968)
ADAPTED TO SHOW CLINICIANS' CHOICES OF DIRECTIONS FOR A
HEALTHY ADULT IN BROVERMAN ET AL. (1970)

Feminine Pole	Masculine Pole
	Healthy Direction
Not at all aggressive	Very aggressive
Not at all independent	Very independent
Very subjective	Very objective
Very easily influenced	Not at all easily influenced
Very submissive	Very dominant
Dislikes math and science very much	Likes math and science very much
Very excitable in a minor crisis	Not at all excitable in a minor crisis
Very passive	Very active
Not at all competitive	Very competitive
Very illogical	Very logical
Very home oriented	Very worldly
Not at all skilled in business	Very skilled in business
Very sneaky	Very direct
Does not know the way of the world	Knows the way of the world
Feelings easily hurt	Feelings not easily hurt
Not at all adventurous	Very adventurous
Very religious[a]	Not at all religious
Has difficulty making decisions	Can make decisions easily
Cries very easily	Never cries
Almost never acts as a leader	Almost always acts as a leader
Not at all self-confident	Very self-confident
Very uncomfortable about being aggressive	Not at all uncomfortable about being aggressive
Very strong need for security[a]	Very little need for security
Not at all ambitious	Very ambitious
Unable to separate feelings from ideas	Easily able to separate feelings from ideas
Very dependent	Not at all dependent
Very conceited about appearance	Never conceited about appearance
Healthy Direction	
Very emotional[b]	Not at all emotional
Does not hide emotions at all[b]	Almost always hides emotions
Very talkative	Not at all talkative
Very tactful	Very blunt
Very gentle	Very rough
Very aware of feelings of others	Not at all aware of feelings of others
Very interested in own appearance	Not at all interested in own appearance
Very neat in habits	Very sloppy in habits
Enjoys art and literature very much	Does not enjoy art and literature very much
Easily expresses tender feelings	Does not express feelings at all

Note: Adapted from Table 1 in Broverman et al., (1970) p. 3.

[a] These items were considered healthy by the college students but not by the clinicians.

[b] These items were considered not healthy by the college students, and healthy by the clinicians.

In a further attempt to establish that clinicians' concepts of masculine and feminine health differ, Broverman et al. compared the mean "health scores" to what they called the "adult health score" but what in fact was the "mean agreement score" on the adult profile. Since the "agreement score" was .866 they found that it was indeed similar to the masculine "health score" of .827 and not as similar to the feminine "health score" of .747. The authors concluded "As predicted...the adult and masculine concepts of health do not differ significantly ($\underline{t}$=1.38, $\underline{p}$<.10), whereas, a significant difference does exist between the concepts of health for adults versus females ($\underline{t}$=3.33, $\underline{p}$<.01)" (p. 5).

Of course, the statistical test is completely invalid, as were the previous ones, because of the lack of independence among the elements that are used to form the means. In searching for a more appropriate ruler to assess the magnitude of all of the differences, the "mean agreement score" of .866 can be of assistance. In choosing poles for a "healthy adult," about 13% of the respondents tended to disagree with the majority. In discussing this score, the researchers describe .866 as being massive agreement, suggesting that when three or four judges depart from the majority that is a matter of little consequence. Thus we can use 13% as a kind of critical difference. Interestingly enough, the span from what they call the "adult health score" (.866) to the feminine "health score" (.747), is less than the critical value of 13%.

In passing it should be noted that it would have been much more logical to assign the adult "health profile" a health score of 1.00 since it was used as the standard, and the "mean health scores" were already based on the adult "health profile" representing a score of 1.00. Or if we wish to look at the logic of this comparison from a different point of view, if we use their statistical approach, the existence or non-existence of a significant difference between the masculine and feminine concepts of mental health and the adult concept, is made to depend upon the magnitude of the adult "agreement score" or the consensus among clinicians on the absolute standard of mental health. This does not appear to have been the logical intent of the comparison. Therefore their conclusion that clinicians' concepts of mental health for adults and men are similar while their concepts for women are different, had no basis in the findings of the study.

In fact the whole concept of relative positions for men and women along the mental health dimension for men, women and adults leaves us with an essential dilemma in interpreting the results of the Broverman study. If all adults are either males or females, then how can males and females each be less healthy than adults? Could it be that the samples responding to the three sets of instructions were different? Does the notion of "healthy adult" evoke a different level of abstraction than the notion of male or

female? If the Broverman interpretation is correct, then "healthy adult" should fall between male and female, but closer to male. Since it does not, one is forced to seek alternative explanations, one of which is that the so-called dimension of mental health defined by these three scores, is not a dimension at all. This implies that comparing the female and male profiles to the adult profile is not an appropriate comparison, and it follows that the male and female "health scores" cannot be compared to an adult "health score."

Broverman et al. arrived at two more conclusions that rested on assumptions that had not been justified and that implied the clinicians had made choices that were in fact not offered to them. The first of these conclusions stated that, "Clinicians are significantly less likely to attribute traits which characterize healthy adults to a woman than they are likely to attribute these traits to a healthy man" (p. 5). This statement suggested that the 38 "stereotypic" items scored in this study were representative of the universe of healthy traits. While that may be the case, it was not shown to be so in the study. The traits were only shown to be "stereotypic" in the opinion of the college students. As noted earlier a pool of items for mental health was never created. Therefore the authors can only generalize about "stereotypic" traits not about mentally healthy traits.

In addition, their conclusion implied first that the

choice for the clinicians was between men and women, whereas it was in reality between one pole of a questionaire item and the other. Second, it implies that some traits were assigned to men and others to women whereas there is no data to show that clinicians did choose one pole when describing men and another when they described women. It is entirely consistent with the data reported, that clinicians chose the same poles for men as they chose for women, and that only the consensus was not the same.

The second conclusion that went beyond the scope of what was actually done in the study stated that, "Clinicians are more likely to suggest that healthy women differ from healthy men by being more emotional, or less objective" (pp. 4,5). This statement implied that the clinicians reported on the levels of traits that would describe a healthy man or a healthy woman. In the study they were only asked to indicate the pole to which a healthy man or a healthy woman would be closer. They were not asked nor was there any opportunity to indicate levels of traits, and they were never asked to compare men and women.

In summary, Broverman et al. asked clinicians to describe a healthy man, woman or adult by indicating one pole or the other on a list of 122 items presented in dichotomous form with opposite poles describing traits in extreme terms. Only those 38 items established by the

Rosenkrantz study as "stereotypic" and known to favor men by a ratio of 27 out of 38 were scored. Based on the proportion of choices falling to one pole or the other on the items, the authors concluded that clinicians see mental health in terms of sex-roles and that the female stereotype is less healthy than the male.

This critique suggested that the greatest weakness in the Broverman study is its indirect reliance upon the data of the Rosenkrantz study. The scored items of the BSRQ are not established as the clinicians would choose to describe men, women or mental health. The reported stereotypic nature of the clinicians' responses may have been only a function of their being scored on "stereotypic" items. The major unanswered question remained, did this widely cited research actually reflect clinicians' attitudes, or did it mainly describe the content of the BSRQ and the particular statistical analysis used in the study? In the next phase of the present study, the opinion of the experts in the field was sought.

Part 2: Assessment and Interpretation of Broverman et al. (1970) in the Current Literature

The Broverman study has been very influential and has been accorded an enthusiastic reception. Despite the obvious flaws in the study, respected authorities in the area of sex-role stereotyping and most authors of text-

books about the psychology of women strongly support the Broverman conclusions.

Sweeping claims have been made for the Broverman study. It has been called a "landmark in demonstrating sex-stereotyping attitudes of counselors" (Johnson, 1978, p. 577). It has also been used to condemn as sex-biased the teaching and practice of psychology, psychiatry and sociology (Levine et al., 1974, p. 327). In short, it has been hailed as a classic in the area of sex-role stereotyping.

The unanswerable question is: Why is so flawed a study so uncritically accepted? A possible explanation is contained in the positive assessment of the study by one of its supporters. Gardner (1971) points out, "This research supplies empirical support for what feminists have long suspected: that therapy is bad for women" (p. 713). While the validity of this empirical support is a moot point, Gardner has accurately described how the Broverman study is viewed by many psychologists. Stricker (1977) speculates that feminist psycholgists may be particularly predisposed by their personal beliefs to accept the Broverman conclusions. He cites the findings by Steinmann (1974) that women psychologists viewed the ideal woman as far more self-oriented than did the national sample and viewed man's ideal woman as more family-oriented than did the national sample. In other words they saw women's conflict with social stereotyping in a more extreme form

than most. Stricker suggests that many feminine psychologists may give the Broverman research such strong support because they so strongly believe the Broverman conclusions to be true.

The lack of published studies to challenge the Broverman results may be a more indirect result of the bias in the field. Smith (1980), in her review of the literature, found that "Studies have been published more often when a sex bias effect was shown regardless of the quality of the study" (p. 406). The doctoral dissertations she reviewed were on the average slightly better in the quality of their design than the published articles to show a sex-bias effect. In general, Smith tells us, the best designed studies showed no sex-bias, and it was the more poorly designed that provided the most support of the sex-bias hypothesis. The studies that showed a sex-bias effect were the most likely to be published.

Bias also seems to operate in the interpretation of published studies in secondary sources. Harris (1970), in his investigation of the growth of mythology around Watson's conditioning experiment with the infant Albert, suggests that secondary sources contribute to the general misinterpretation of classic studies by erring in their description of these studies. He believes that the important influence in producing these errors is the author's own opinions. A similar idea is presented by

Samelson (1974) and Baumgardner (1977). Support for this idea was also found in the literature review for the present study. The review of the secondary sources produced an interesting pattern. There were many errors made in citing Broverman, however, the errors always increased the severity of the bias reportedly found against women. No author citing the study was in error by reporting a smaller effect than that claimed by Broverman. Most authors citing the study heartily endorsed the very strong claims made by Broverman, and, as will be shown in this review, through their own misinterpretation made even stronger claims for the study.

Reviews of the literature on sex-role stereotyping always mention the Broverman study. For example, the "Report of the Task Force on Sex Bias and Sex-Role Stereotyping in Psychotherapeutic Practice" (1975) cites the Broverman study as empirically demonstrating "that psychologists expect women to be more passive and dependent than men" (p. 1169). This, rather an exception to the rule, is an accurate presentation of the conclusions of the Broverman study. However, this is not surprising since Paul Rosenkrantz, one of the authors of the Broverman study, was a member of the Task Force.

In the special edition on counselling women, Vol. 8, No. 1 of The Counselling Psychologist, Roberta L. Nutt (1979) uses the Broverman study to support her claim that a significant proportion of therapists, "allow sex role

bias...to influence their dealings with their clients" (p. 18). In fact, although it claims to, the Broverman study has no data on how therapists actually deal with their clients. A more accurate statement of the Broverman findings is in the article by Carol Blimline and Janice Birk. In "A Note of Impatience," they state that, "sex role stereotyping and biased attitudes still exist among counselors/therapists" (p. 49). The Broverman study looks only at therapists' attitudes; any conclusions about the practice of therapy are either restatements of overdrawn inferences from the original study, or inferences made by the writers who quote it.

Sandra Bem is unwittingly guilty of several errors in her paper, "Psychology Looks at Sex Roles: Where Have All the Androgynous People Gone?", presented at the UCLA Symposium on Women in May of 1972. Speaking of the Broverman research she says:

> According to these clinicians, a woman is to be regarded as healthier and more mature if she is: more submissive, less independent, less adventurous, more easily influenced, less aggressive, less competitive, more excitable in minor crises, more susceptable to hurt feelings, more emotional, more conceited about her appearance, less objective and more antagonistic toward math and science: exactly the same description which these clinicians used to characterize an unhealthy immature man or unhealthy, immature adult (sex unspecified). (p. 3)

We can see that Bem accepts the Broverman bias against emotionality. Even though the clinicians chose the behaviors "to be emotional" and "not to hide emotions" as healthy, the Broverman study and Bem herself include emotionality under the general rubric of a "powerful [sic], negative assessment of women" (Broverman et al., 1970, p. 4). Bem has failed to notice that the clinicians did not believe that emotionality was a negative trait, and that the design of the study did not permit the same clinicians to describe both men and women.

She goes further than the Broverman study when she suggests that women are considered healthy in proportion to their submissiveness, lack of independence, and so forth. The study does not say that the more submissive a woman is, the more healthy she is judged. The instructions to the subject-clinicians mentioned neither degrees of health or levels of traits.

Bem also distorts the study when she claims that the traits used by the clinicians to describe a healthy woman, are the same ones used to describe an unhealthy, immature man or adult. The clinicians were not asked to describe either unhealth or immaturity. While the study claims that the stereotypic items discriminate between masculinity and femininity, we cannot assume that they also define a health-unhealth dimension. Rosenkrantz (1968) established only that these traits discriminated between college students'

concepts of men and women. We do not know what traits the clinicians would use to define the health-unhealth or maturity-immaturity continuum.

Bem misleads us further by equating the healthy male with the healthy adult. While the original study purports to show that the so-called "health scores" for men and adults are not significantly different, it does not claim that the descriptions drawn by the clinicians are identical. In fact we are not told on how many items they match. The Broverman data does not warrant Bem's conclusions.

In general, Bem's comments offer an oversimplified picture of the Broverman findings. She implies that a dichotomy of health has been established with women and the unhealthy poles of the traits at one end, while men and adults are with the healthy poles of these traits at the other. The Broverman study claims only to have established that the female "health score" is significantly different from the male "health score"; even it does not go so far as to claim that males and females are described in opposite terms by the clinicians. The Broverman study may imply it by their inclusion of the table of masculine and feminine traits based on the results of the Rosenkrantz study, but a careful reading of their discussion shows that

they held back from so clearly unsupported a conclusion. In fact, as noted earlier, the similarity in the "health scores" for men and women suggests that the profiles could be quite similar.

Kay Deaux, in her book The Behavior of Women and Men, accepts as proven the assumption made by the Broverman study, that the sex-role stereotypes found by the Rosenkrantz (1968) study are shared by the culture as a whole. Like Bem she concludes that while men are seen as healthy, women are seen to embody the unhealthy traits of "emotionality, conceit, and submissiveness" (p. 14). She too does not accept the opinion of the clinicians that emotionality is healthy. Also like Bem she assumes that the test items represent the health-unhealth dimension. Even though the listing of traits in the original study implies this distinction, even Broverman et al. only claim that "clinicians have different concepts of health for men and women" (p. 5), not that they have opposite concepts.

Rhoda Unger, in Female and Male: Psychological Perspectives, draws some unique conclusions based on the Broverman study. She says, "Healthy women are perceived as less adult by clinical standards" (p. 34). She believes that this means a lower standard of mental health is applied to women. As she states further on in her book, she believes that, "if a male and female come in with identical complaints of unaggressiveness and lack of independence, corrective treatment is likely to be thought necessary only

for the male...the traits conceived of as normal for women, which may be the goals of treatment, are seen as inadequate for adult functioning in general" (p. 94). In other words, she believes that women who need help will not be offered it and, if they are offered treatment it will be focused on unhealthy goals.

Unger also concludes that "masculine characteristics are more highly valued than...feminine characteristics" (p. 35). This is not one of the conclusions of the Broverman research. The Rosenkrantz study did address this question however, and the methodology used was discussed in the previous chapter. The conclusions of Rosenkrantzet al. were directly opposite to those claimed by Unger. They conclude that there is no significant difference between "the absolute level of social desirability of the male and female-valued items" (pp. 290-1). Unger is really not jusitified in the claims she makes for the Broverman research.

Al-Issa, in his textbook, The Psychopathology of Women, also overinterprets the Broverman conclusions about a double standard of mental health for women. Broverman concludes that a woman can either, "exhibit those positive characteristics considered desirable for men and adults and thus---be deviant in terms of being a woman, or...accept second-class adult status" (p. 6). In other words, women are either not quite adult or not quite womanly, and in this, Broverman et al. have already overinterpreted the data presented in their study. But Al-Issa further interprets

the Broverman conclusions by using them to support his claim that women are subject to even more serious discrimination. He says, "Whether they show masculine or feminine behavior, they are considered sick" (p. 29). His claim that clinicians will label non-stereotyped women as "sick" is not supported by the data. Nor is there evidence that stereotyped women will be labeled "sick." While it is easy to see how Al-Issa could interpret the Broverman conclusions as he does, there must be some onus upon those who cite studies to verify the validity of the conclusions of those studies. If Al-Issa consulted the Broverman data, rather than further interpreting the Broverman conclusions, his own conclusions would be more accurate.

Phyllis Chesler, in her very influential book, Women & Madness, also quotes the Broverman (1970) study with some distortions. Like Sandra Bem, she assumes there is a one to one correspondence between the traits assigned to the healthy male, and the healthy adult. This leads her to conclude that all the traits assigned to health males are socially desirable. She also claims the study shows that women are "diagnosed" for exhibiting feminine behaviors, while other behaviors are deemed "unacceptable" in women. There is no basis in the study for these conclusions. A diagnosis of health or unhealth was not asked for. Chesler may believe that women are "diagnosed" for feminine behaviors, but there is no evidence in the Broverman study to support this belief.

Shirley Weitz, in her text, Sex-Roles: Biological, Psychologicial and Social Foundations, (1977), is very faithful to the conclusions of Broverman et al. She includes two of the main points made by Broverman: (a) The ideal for mental health for women is significantly different from that for adults, and (b) Clinicians have different concepts of health for men and women. While the validity of these conclusions may be in question Weitz does present accurately Broverman's own claims.

The book of readings, Women in Therapy: New Psychotherapies for a Changing Society, edited by Violet Franks and Vasanti Burtle (1974), contains four articles, each of which makes some error in interpreting the Broverman (1970) study.

The first, by Benjamin Fabrikant, quotes Phyllis Chesler's summary from an article in Psychology Today (1971). He agrees with Chesler's interpretation of the Broverman data as showing that female neuroses are, "a result of societal demands and discrimination rather than the supposed mental illness of the individual" (p. 89). In other words, he believes that society demands unhealthy behaviors from women. Fabrikant also agrees with Chesler that the Broverman study shows that clinicians reinforce these same unhealthy behaviors in women.

In the same book, Iris Goldstein Fodor, for the most part, only repeats the Broverman conclusions. The only distortion of the Broverman presentation is her reference

to the trait "house oriented" (p. 133). The only possible source of this reference is the table of male and female traits adapted from the Rosenkrantz study. One pole listed is "Very home oriented" (p. 3). Fodor's use of "house-oriented" is not accurate and it creates an even more unflattering stereotype of women.

Barbara Kirsh, in her article,"Consciousness-raising Groups as Therapy for Women" (1974), cites the Broverman study when she lists traits society considers masculine and feminine (p. 237). However, she lists traits found to be not stereotypic by Rosenkrantz et al., as well as some listed in the table referred to above from Broverman. Since she also cites Block et al., 1973, as a source, there is no way to determine which traits she is attributing to the Broverman research. Her casual method of citing sources prevents the reader from determining just how precise her citations are.

Ann Steinmann is in error in her interpretation when she claims that "A mentally healthy female...was seen as passive, emotional, dependent, uncompetitive, non-objective [sic] submissive, easily influenced" (p. 77). The terms actually used in the Broverman discussion, which appears to be the source of this reference, are: "more submissive, less independent,...more easily influenced, less aggressive, less competitive,...more emotional, and less objective" (p. 5). Steinmann has removed the qualifying word "more" in several cases and changed relative characteristics into absolutes.

For example "more emotional" has become "emotional". She has also changed "less" of a trait into the opposite of that trait. For example, "less independent" has become "dependent" and "less objective" has been changed to "non-objective." Steinmann has added traits that do not appear on the BSRQ and attributed them to the clinicians. In fact, "non-objective" is not a personality trait.

Thus in one book of collected readings, these four authors present four different interpretations of the Broverman findings. Their conclusions are not only different but they contain varying degrees of inaccuracies. What they do agree on is that there is a bias against women in our society and in the therapy our society provides for women.

Beginning in 1977, a few journal articles appeared that took a more cautious view of the Broverman findings. Donna Billingsley (1977) for example, accepts the conclusion that the clinicians' model for mental health follows society's female stereotypic, but she does note that the Broverman study "does not provide evidence that clinicians' sex-role-stereotypic mental health attitudes carry over into their psychotherapeutic treatment practices" (p. 251). Billingsley states that, even though the clinicians may have a female stereotype in their minds, they do not necessarily try to make individual female clients fit that stereotype. This point is echoed by most critics of the Broverman research.

Mary Lee Smith (1980) does not accept the widely held belief that a sex-bias in counselling and psychotherapy has been proven. She also specifically criticises the Broverman

study which in her view forms the "primary evidential base" for these beliefs (p. 329).

First of all, she points out that neither the Broverman study itself, nor the literature that cites the Broverman study, demonstrates the necessary connected series of "intervening variables" to take us from the Broverman finding, that clinicians hold sex stereotyping concepts about women, to establishing the actual negative effects on women clients. Smith believes that these missing steps are necessary to "prove the harmfulness of sex bias and the relevance of sex stereotypes to counseling outcomes" (p. 393). Without these steps, the Broverman research is not relevant to the question of sex-baised therapy. This strikes at the very heart of the issue of sex-biased therapy. Even if we accept the Broverman findings that therapists hold sexually-stereotyped attitudes toward women,, it does not necessarily follow that the therapy they provide is biased against women.

Next, Smith goes on to criticize the actual validity of the Broverman findings. She points out that even though they study finds a difference between the means for males and females that is statistically significant, the actual difference between the mean proportions is only .08. Although she does not elaborate on this point, what she raises is a question of definition. Can a difference of .08 in mean proportions be called stereotyping? Does this difference have any meaning in reality? As was discussed earlier, in the Broverman study this difference could be caused by as few as two raters.

The third part of her paper attempts to bring the influence of the Broverman study into proper proportion. In order to do this, Smith reviews the published and unpublished research in the area of sex-bias in counseling. She uses meta-analysis to include all studies whether good or poor in design. This allows her to give greater weight to the better designed studies and a lesser weight to the poorer ones. She concludes that, overall, published studies show a small sex-bias effect against women, while unpublished studies show a bias of the same magnitude in favor of women.

In the fourth section, she questions the finality of the Broverman findings. She reviews studies using the BSRQ several of which have produced results quite contradictory to the Broverman findings. Smith points out that studies showing a negative sex-bias effect not only have been cited more frequently than studies not showing that effect, but studies that show this effect have been published more often than studies that do not.

Bernard E. Whitely Jr. (1979) accepts some of the Broverman conclusions but is very critical of others. He accepts the Broverman charge that therapists share the sex-role stereotypes of society, and that they define mental health in terms of stereotypes. But like Smith, he notes that the authors failed to investigate the extent to which the attitudinal bias of therapists resulted in discriminatory behavior. He points out that other "investigation of such bias and behavior has generally found no-such discrimination

and cast doubt on the generality of the bias" (p. 1309).

He also questions the use of dichotomous scoring on the BSRQ. He notes that Maxfield (1976) using a continuous scale found no statistical difference on 50% of the items. When a continuous scale is used it appears that men and women are rated on the same side of the neutral point. Therefore, the differences in clinicians' view of health for men and women may not be so great as assumed. In other words, there may be a difference of degree for men and women on some traits but not necessarily different traits for men and women.

George Stricker in his controversial review of the literature, "Implications of Research for Psychotherapeutic Treatment of Women" (1977), criticizes both the methodology and the conclusions of the Broverman research. He states that it has become the "single most important series of studies to date" because it is so widely cited in the literature and the popular press (p. 17). But as he also points out, the citations are usually incorrect.

He begins by criticizing, not only the Broverman study, but the usefulness of analogue studies in general. As he describes it, this approach asks therapists to describe women or female patients in general and these responses were "taken as indicative of therapists' orientations to treatment with women" (p. 14). Like both Smith and Whitely, he believes that the generalizability of the conclusions drawn from the analogue data needs to be tested.

He also notes that the perjorative labels such as "illogical" were not assigned by the subjects but created by the authors of the BSRQ. As he points out, stereotyping a woman as less logical than a man is quite different from stereotyping her as illogical.

Stricker also notes the Broverman study conclusions that clinicians believe women to be more submissive, less independent, etc. However, as Stricker correctly states, the study does not present the raw data that would allow us to determine whether or not this conclusion is warranted. The Broverman study does no analysis of individual items which could show statistical differences on individual traits. Stricker neglects to point out further, that there is no data generated by the study that actually compares men and women or indicates desired trait levels for either.

Stricker's over all conclusion is that neither the Broverman data nor any other data from sex-bias studies supports the formulation that male therapists impose stereotypes on their female clients. Yet, as he tells us, "conclusions strikingly at variance with the data are repetitively drawn and quoted" (p. 18). Thus in his opinion, the widespread belief that sex-bias in therapy has been empirically demonstrated by the Broverman study, does not hold up when the evidence is closely examined. However, the belief persists on its own, independent of experimental evidence.

The hard hitting critique by Stricker brought forth a

reply, not from the Broverman group, but from Patricia Maffeo in the American Psychologist, 1979.

She bases her argument on the assumption that although the "magnitude of effects" might not be large, the direction of the effect is detrimental to women. She accepts the Broverman conclusions that women were viewed by therapists as less logical, less competent, and less independent. What is missed by Maffeo, is that there were no comparisons made of men and women. She speaks of the "ideal scores" for males and females and their relative values. However, there were no idea scores produced by the dichotomous scoring method used by the Broverman study.

Maffeo acquits the BSRQ of the charge of in-built bias on the grounds that the questionnairewas empirically derived. However, she fails to note that it was empirically derived to differentiate men from women, not health from unhealth and she fails to mention that it was derived using college students as subjects, not clinicians. Empirical derivation is not a defense per se, in the case of the Broverman study, college students were used to derive the questionnaire items, while the conclusions were drawn about clinicians.

Stricker's rebuttal in the July, 1980 issue of American Psychologist mainly restates his original objections to the Broverman study. As he points out, Maffeo has countered his argument mainly by again citing studies whose conclusions of sex bias Stricker demonstrated to be "artifactual" in his critique (i.e. Neulinger, 1968; Thomas &

Stewart, 1971). He also rejects Maffeo's charge of bias. Stricker claims that his only bias is "against inappropriate conclusions drawn from methodologically suspect data" (p. 681). Maffeo's reply has not persuaded him that his criticisms of the Broverman study are in any way unfounded.

This controversy is not settled. Maffeo does not attack Stricker's specific criticisms. Her main defense of the Broverman (1970) study is a charge of bias against Stricker. Unless the specific criticisms of the Broverman study made by Stricker and others can be adequately refuted, the Broverman (1970) study should continue to be questioned and not be accepted as a classic work on sex-role stereotyping.

Part 3: Replications of Broverman et al. (1970)

Although it has been widely cited and very influential, the Broverman sex-role research has not found support in replications. Studies influenced by the Broverman research and using the BSRQ or the nearly identical Rosenkrantz Stereotype Questionnaire have usually deviated so much from the design of the original study, that the results are simply not comparable. Most studies have altered the instrument, the instructions, or the population. As Judith Worell points out, "Although this type of study may have utility for some purposes it is clearly not a proper replication of Broverman et al." (p. 785).

Table 2 contains five studies based on the Broverman

TABLE 2

REPLICATIONS OF BROVERMAN ET AL. (1970)

Study	Instrument	Instructions	Population	Analysis and Results
Maslin & Davis (1975)	BSRQ 38 st. items 60-point scale	Describe a healthy adult, male, female.	Counsellor trainees	Mean total scores of profiles describing men, women and adults were compared. Scores for females vs. adults showed sig. dif. ($p < .01$) only when male counsellors were treated as a separate group.
Anderson (1975)	BSRQ 32 st. items plus 10 buffer items 60-point scale	Describe a healthy socially competent male, female, person	Clinical psychologists	Total scores were compared. The only sig. dif. found was between the averaged profiles for men and persons vs. females. ($p = .05$) N.B. Post hoc item analysis indicates stereotyping may discriminate against males.
Maxfield (1976)	Short form Rosenkrantz Questionaire 60-point scale 82 items	Describe case histories. Presented to one group as males, to the other as females.	Psychotherapy division of APA	Individual items analysed. Means for males and females compared. Over 90% of items had means on same side of neutral point. Differences were in favor of females half of the time.
Aslin (1977)	BSRQ 82 items. Dichotomous	Describe healthy adult, female, wife, mother	Feminist and community mental health psychotherapists.	Individual items analysed. None of the female stereotypic items were chosen as stereotypic of females in this study.
Hayes & Wolleat (1978)	BSRQ 37 st. items	Male and female client. Same script read by male and female.	Counsellor trainees.	Individual items analysed. The sex of client showed an effect on 16 items ($p < .05$). On 29 items, including the 16 above, the mean for the female descriptions was closer to the "masculine" end of the continuum.

study that used modified forms of the BSRQ. Maxfield (1976) used what is called the short form of the Rosenkrantz Stereotype Questionnaire but is in fact 82 items taken from the BSRQ. In the studies shown, the populations sampled, the instructions, and the number of questionaire items used all differed. Yet the studies seemed to break fairly clearly into two groups: those that compared the average or total profile scores, and those that compared the scores on individual items. When the total score method was used, some sex-effects were found which support the Broverman et al. (1970) study, but when the individual items were analysed, the results either only partly supported, did not support at all, or contradicted the original findings.

The fact that the total score method tended to support Broverman is some evidence that the built in bias of the test, (70% of the scored items are male-valued), may be an important factor in Broverman's findings. But since those studies that do contradict Broverman's findings, that is those by Maxfield (1976), Aslin (1977), and Hayes and Wolleat (1978), used neither the same instructions as the original Broverman study, nor the complete BSRQ, many questions of comparability could be raised.

It was in an attempt to fill the apparent need for replication that the present study was planned. It was designed to resemble the Broverman et al. (1970) study enough to allow for comparisons and yet modified enough to avoid some of the shortcomings of that study which have been noted by its critics.

CHAPTER III

DEFINITIONS AND QUESTIONS

Definition of Sex-Role Stereotyping

Since the essential question asked by the Broverman et al. (1970) study was whether or not there was sex-role stereotyping by clinicians, a working definition of the term sex-role stereotyping was need for this study as well. It was decided to retain the Broverman definition of sex-role stereotypes as "highly consensual beliefs about the different characteristics of men and women" (p.1). This definition included two important ideas about sex-role stereotypes: first, there must be considerable agreement among the clinicians about what traits are typical of men and women, and second, the traits chosen for men and women must be different. In this study, the concept of sex-role stereotyping was assumed to require both parts.

Questions Asked by This Study

The questions asked by the present study fell into two categories: Those that could be answered by dichotomous reponses, and those that could only be answered by collecting responses on a calibrated scale. A five-point scale was chosen for convenience.

When the responses were interpreted dichotomously, in order to compare the results of this study with the Broverman study, the only questions that could be answered concerned

the subjects' choices of poles and the degree of agreement among the subjects on the poles chosen. The use of five-point scoring, however, allowed additional questions about the range of subjects' responses, their median responses also allowed comparisons between the response patterns on the three sets of instructions.

The questions to be answered by dichotomous scoring were as follows:

1. Would more of the poles attributed to adults be attributed to men than to women?

2. Would some items show a higher consensus among clinicians than others in their descriptions of men and women?

3. Would the descriptions of males show a higher consensus than the descriptions of females as suggested by the higher agreement scores on the male profile reported by Broverman?

The questions to be answered by the five-point scoring were:

1. Would a large proportion of respondents support Broverman's use of the extreme forms of traits by choosing the extreme ends of the scale on the scored items?

2. Would the clinicians descriptions of men and women be at different ends or at least be at clearly different locations on the five-point scale?

3. Would the median of the male or of the female description be closer to the median for the adult description?

CHAPTER IV

EXPERIMENTAL PROCEDURE AND DESIGN

The Instrument

The instrument used in the present study contained the original 122 items from the Rosenkrantz Sex Stereotype Questionnaire. Paul Rosenkrantz kindly provided the items. Neither Inge Broverman nor Paul Rosenkrantz was able to provide a duplicate of the form of the BSRQ used in the 1970 study.* However we know from the Broverman article that seven items were changed to form the BSRQ. They included only three of the stereotypic items which were dropped and replaced by two new buffer items. The 38 stereotypic items listed by Broverman were all included in the questionnaire supplied by Rosenkrantz. Therefore the difference between the items used in this study and those used in the 1970 BSRQ could be only in seven of the 84 buffer items.

The items were presented in the following form:

Not at all aggressive 1...2...3...4...5 Very aggressive

Subjects were asked to respond on an optical scoring sheet provided.

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* Item #94, "Very proud of sexual ability", one of the items included in this questionnaire was replaced in the 1970 study. Therefore the questionnaire used here cannot be identical to the 1970 BSRQ.

The Population and the Sample

The population studied was made up of certified psychologists, registered social workers, and psychiatrists practicing in the Province of Alberta as of January, 1981.

Random numbers generated by computer were used to select 120 subjects from the membership list of the Psychologists Association of Alberta, 39 psychiatrists from a list of those registered with the College of Physicians and Surgeons of Alberta, and 78 social workers from those registered with the Alberta Association of Social Workers on June 1, 1980.

A total of 237 questionnaireswere sent out. Seventy-one usable responses were returned for a response rate of 30 per cent. A breakdown of the subject sample by sex and profession appears in Table 2 below.

TABLE 3

THREE SUBJECT GROUPS BY SEX AND PROFESSION

	Descriptions						Totals	
	Men		Persons		Women			
	M	F	M	F	M	F	M	F
39 Psychologists	6	5	3	9	5	10	14	24
27 Social Workers	8	6	2	1	4	6	14	13
6 Psychiatrists	2	0	2	2	0	0	4	2
Total 71	16	11	7	12	9	16	32	39

It was not possible to determine how closely the present sample matched the original for sex, age, and occupation because there was simply not enough information in the Broverman article. Very little additional information was available from Inge Broverman herself. All she could add to the published information was that the largest group in her sample were the psychologists and that there were few psychiatrists included.*

The Instructions

The three professions were each divided up into three groups. The first group was asked to describe a normal man, the second to describe a normal woman, and the third to describe a normal adult.

The instructions of the Broverman study that asked subjects to describe "mature, healthy, socially competent" men, women and adults were not repeated in this study because the results of the pilot study using these instructions appeared to be artifactual.

In the pilot study, 28 undergraduate students in Educational Psychology were given the BSRQ with the original Broverman instructions and asked to describe men, women and adults using a five-point scale. When the results were analysed, on 15 out of the 38 stereotypic items, the relative positions of the means for men and women showed a reversal from the results reported by Rosenkrantz et al.

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*Broverman, Inge. Personal communication, October 14, 1980.

(1968) and Broverman et al. (1970). For example, men were assigned a higher score on "Cries easily" than were women. This was such an unbelievable reversal of stereotyping that an explanation was sought in debriefing the subjects.

It was discovered that many had described an ideal rather than an average of normal person. Since the concept of mental health in today's context of personal development may imply a self-actualized or idealized person, the instructions were altered to contain only the adjective "normal." It was hoped that this would avoid a repetition of the reversal of stereotypes or wishful thinking of the pilot study.

In order to test the efficacy of this choice a debriefing item was added to the questiomaire It is item #123 on the questionnaire included in the appendix. Respondents were asked about the image they might have used to choose their responses. They were asked if they had thought of a real person, an idealized person, themselves, if they had thought of unhealthy persons and described an improved state for them, and as a fifth alternative they could describe their process in their own words and send the description in with their answer sheet. Analysis of this item showed that 66 per cent of the respondents chose category (1): "I thought of a real person or a composite of real people I know who are competent and healthy." Only two respondents reported that they had thought of an idealized person.

The correctness of the choice of instructions was

further supported when the results of the present study did not show the reversal of male and female descriptions seen in the pilot study.

It was assumed that the change in instructions was justified as it produced results that were more comparable to the original results and the expectations of this study than did the original instructions. This was granted, however, to be only an assumption.

Copies of the covering letter, instruction sheet and questionnaire used in this study appear in the appendix.

The Scoring. The 122 items were presented in a dichotomous form and the subjects were asked to respond on a five-point scale. An answer sheet suitable for optical scoring was provided. The debriefing item was presented as a multiple choice question at the end of the questionaire. It too could be answered on the answer sheet, or if the respondent preferred, in detailed form on the last page of the questionnaire.

The forced choice of dichotomous poles used in the original study was not duplicated. It has been cited as a possible source of distortion (Whitely, 1979; Stricker, 1977) and the original authors no longer use it.* The

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*Rosenkrantz, Paul. Personal communication, September 29, 1980.

reason it was not used in this study is that having subjects choose between one pole or the other in an isolated description of men, women or adults, could only tell us which pole was the preferred pole description and the degree of agreement there was about the choice. If the same pole were preferred for all three descriptions the only difference would be in the consensus for each group. This would be the only way to compare the results. This appears to be what was done in the Broverman study.

Although the Broverman group concluded that clinicians describe men and women differently, they only reported differences in consensus. It was hoped that by using a five-point scale and finding the median response on individual items, it would be possible to look at actual similarities and differences in the clinicians' descriptions of men and women.

The same 38 "stereotypic" items scored by Broverman were scored in this study. In order to compare the results, the responses on the five-point scale were converted to dichotomous responses. Two methods of converson had to be used, because although Broverman calls all the items bipolar, only 11 are actually bipolar, the remaining 27 are unipolar (see Table 4). On bipolar items all responses to the left or right of (3) were assumed to indicate the left-hand and right-hand poles respectively. A choice of the middle response (3) was interpreted as a choice of neither pole. For example, in item #13, "Very subjective--

TABLE 4

THIRTY-EIGHT STEREOTYPIC ITEMS SORTED INTO UNIPOLAR AND BIPOLAR CATEGORIES

Twenty-seven Unipolar Items

Item #		
1	Not at all aggressive	Very aggressive
4	Not at all independent	Very independent
6	Not at all emotional	Very emotional
10	Does not hide emotions at all	Almost always hides emotions
18	Not at all talkative	Very talkative
19	Not at all easily influenced	Very easily influenced
28	Not at all excitable in a minor crisis	Very excitable in a minor crisis
42	Not at all competitive	Very competitive
49	Not at all skilled in business	Very skilled in business
51	Knows the way of the world	Does not know the way of the world
55	Feelings not easily hurt	Feelings easily hurt
59	Not at all adventurous	Very adventurous
60	Not at all aware of feelings of others	Very aware of feelings of others
61	Not at all religious	Very religious
64	Not at all interested in own appearance	Very interested in own appearance
66	Can make decisions easily	Has difficulty making decisions
73	Never cries	Cries very easily
75	Acts as a leader	Always acts as a leader
87	Not at all self-confident	Very self-confident
95	Not at all uncomfortable about being aggressive	Very uncomfortable about being aggressive
100	Very little need for security	Very strong need for security
101	Not at all ambitious	Very ambitious
105	Unable to separate feelings from ideas	Easily able to separate feelings from ideas
106	Not at all dependent	Very dependent
107	Does not enjoy art and literature	Enjoys art and literature very much
114	Easily expresses tender feelings	Does not express tender feelings at all easily
115	Very conceited about appearance	Never conceited about appearance

Eleven Bipolar Items

#13	Very subjective	Very objective
24	Very submissive	Very dominant
25	Dislikes math and science very much	Likes math and science very much
33	Very passive	Very active
38	Very blunt	Very tactful
40	Very rough	Very gentle
43	Very illogical	Very logical
47	Very home oriented	Very worldly
50	Very direct	Very sneaky
80	Very neat in habits	Very sloppy in habits
81	Very quiet	Very loud

Very objective", a choice of (1) or (2) was assumed to indicate some subjectivity. A response of (4) or (5) was taken to indicate objectivity. However, if the subject answered with a choice of (3) this indicated that neither subjectivity nor objectivity was chosen as a descriptive characteristic.

On unipolar items, the left-hand pole usually contained terms such as "none" or "not at all" representing a zero quanitity of the characteristic. The right-hand pole usually included the adverb "very." To interpret the results dichotomously, the response (1) was taken to indicate the choice of none of the characteristics and responses of (2), (3), (4), and (5), to indicate varying amounts of the characteristic. For example, in "Not at all aggressive--Very aggressive," the response (1) was interpreted to mean no aggressivity, and all other responses to indicate some aggressivity. Exceptions to this rule were items #51, "Knows the way of the world--Does not know the way of the world," and #114, "Easily expresses tender feelings--Does not express tender feelings at all easily." In item #51 the response of (5) was taken to indicate a lack of "knowing" and in item #114 it was interpreted as a lack of "ease." Responses of (1), (2), and (3) and (4) on both these items indicates some degree of 'knowing the way of the world' and some 'ease of expressing tender feelings.'

CHAPTER V

ANALYSIS OF THE DATA

This chapter is divided into four parts. In part 1, the subjects' responses were interpreted dichotomously. In part 2, the same responses were analysed retaining the five-point scale used by the subjects. In part 3, the responses at the polar extremes, that is (1) and (5), plus the responses at the mid-point, (3), as well as the missed responses were also looked at. And in the last part, some conclusions were drawn based on the two methods of scoring the data.

Part 1: Analysis of Thirty-eight Stereotypic Items Using Dichotomous Scoring

A. Unipolar Items

On all the unipolar items the subjects chose the same pole to describe men, women and adult persons. Table 5 shows the percentage of subjects choosing that pole and the trait chosen.

The Broverman method for finding "health scores," by comparing the descriptions of both men and women to the descriptions of adults, could not be repeated in this study because the descriptions of men, women and adults were made up of identical poles.

B. Bipolar Items

The distribution of the responses to the bipolar items analysed dichotomously are presented in Table 6. By far

TABLE 5

UNIPOLAR ITEMS

SUBJECTS RESPONSES INTERPRETED AS A CHOICE OF LEFT-HAND OR RIGHT-HAND POLE OF QUESTIONNAIRE ITEMS

ITEM	PERCENTAGE OF RESPONSES Men (27)	Persons (19)	Women (25)	TRAITS
1	100	100	100	Aggressive
4	100	96	100	Independent
6	100	100	100	Emotional
10	100	100	100	Hides emotions
18	100	100	100	Talkative
19	100	96	100	Easily influenced
28	93	92	95	Excitable in a minor crisis
42	100	100	100	Competitive
49	100	100	100	Skilled in business
51	100	100	100	Knows the way of the world
55	100	100	100	Feelings easily hurt
59	100	100	100	Adventurous
60	100	96	100	Aware of feelings of others
61	96	100	100	Religious
64	100	100	100	Interested in own appearance
66	96	92	100	Has difficulty making decisions
73	85	96	100	Cries easily
75	100	96	100	Acts as a leader
87	100	96	100	Self-confident
95	92	100	100	Uncomfortable about being aggressive
100	100	100	100	Needs security
101	100	100	100	Ambitious
105	100	96	100	Separates feelings from ideas
106	100	100	100	Dependent
107	100	96	100	Enjoys art and literature
114	89	100	88	Easily expresses tender feelings
115	100	100	95	Not conceited about appearance

TABLE 6

BIPOLAR ITEMS

SUBJECTS RESPONSES INTERPRETED AS A CHOICE OF THE LEFT-HAND POLE OR RIGHT-HAND POLE OF QUESTIONNAIRE ITEMS OR NEITHER

ITEM	PERCENTAGE OF RESPONSES Men (27)	Persons (19)	Women (25)	TRAITS
13	52	8	11	Objective
	41	56	68	NEITHER
	7	36	21	Subjective
24	70	24	5	Dominant
	30	68	68	NEITHER
	0	8	26	Submissive
25	41	8	10	Likes math and science
	52	68	58	NEITHER
	7	24	32	Dislikes math and science
33	70	44	37	Active
	22	44	42	NEITHER
	7	12	21	Passive
38	15	40	47	Tactful
	56	48	53	NEITHER
	30	12	0	Blunt
40	19	44	74	Gentle
	56	56	26	NEITHER
	26	0	0	Rough
43	48	36	37	Logical
	44	44	53	NEITHER
	7	20	10	Illogical
47	22	8	10	Worldly
	48	60	53	NEITHER
	30	32	37	Home oriented
50	11	8	10	Sneaky
	44	32	58	NEITHER
	44	60	32	Direct
80	22	4	5	Sloppy
	56	75	53	NEITHER
	22	21	42	Neat
81	18	8	0	Loud
	78	80	95	NEITHER
	4	12	5	Quiet

* Percentages do not always add up to 100 because of rounding off.

the most popular response category was "neither," indicating that the subjects most often chose to describe men, women and adult persons not by extremes but by a response of (3). This reponse represented the mid-point between the dichotomous categories on each questionnaire item. For example, subjects saw both men and women as "neither" loud nor quiet.

In a few cases the left-hand pole, that is categories (1) plus (2),contained more responses than did the (3) or "neither" category. Men were seen to be "objective," "dominant," "active" and, by a plurality of one subject, "logical." Women were seen as "gentle," and adult persons as "direct." Also for adults the categories of "active" and "neither" active nor passive were given equal weight.

The right-hand pole, that is responses (4) and (5), was the category most often chosen for adults on item #50. They were described as "direct." The categories of "direct" and "neither" were used equally to describe men.

However, the choice of a pole was not the most frequent outcome. On 25 descriptions out of 33, on the bipolar items, "neither" was chosen to describe men, women and adult persons. Next, the Broverman method of determining "health scores" was used on the bipolar items. As can be seen in Table 7, "neither" was the most common adult profile response on all items except #33 and #50. On item #33, the left-hand pole and "neither" were equally

TABLE 7

BIPOLAR ITEMS SCORED AS LEFT-HAND POLE, RIGHT-HAND POLE AND NEITHER

Percentage of Male and Female Descriptions Falling into the Same Category of Description as the Adult Person

Items	Percentage of Male Descriptions in Adult Category	Adult Person Category	Percentage of Female Descriptions in Adult Category
Item 13	41	Neither	68
Item 24	30	Neither	68
Item 25	52	Neither	58
Item 33	70 22	L-H Pole (44.4) Neither (44.4)*	37 42
Item 38	56	Neither	53
Item 40	56	Neither	26
Item 43	44	Neither	53
Item 47	48	Neither	53
Item 50	44	R-H Pole	32
Item 80	56	Neither	53
Item 81	78	Neither	95
Total	597	Total	638
$\bar{x}$ =	49.8	$\bar{x}$ =	53.2

* There were an equal number of responses in these two categories so either category considered an adult response.

popular, and on item #50 the right-hand pole was most often chosen. As in Broverman, these categories were used as the profile of mental health.

In Table 7, the proportion of responses describing men and women by the category chosen for adults is shown, and profile scores for men and women, similar to the Broverman "health scores" are computed by taking the mean of these proportions. The female description has a higher proportion of responses in the "adult persons" category than the male profile on 7 out of 11 items. The mean score for the male profile was 49.8 while the female profile was higher at 53.2. This is a reversal of the Broverman findings.

Comparison to the Broverman Results

The analysis of the bipolar items in this section led to three points of disagreement with the Broverman study.

1. The Broverman conclusions imply that a lower score on one pole of an item logically or conceptually implies a higher score on the other pole. For example, if men are described as more active then women must be seen as more passive. However, if the respondents are allowed to make a choice of neither pole, a more complex picture emerges. For example, on item #50, men and adult persons were more often described as direct than were women. However, as the percentages in Table 6 show, this does not mean that women are more often described as

sneaky. In the present study, men were seen as sneaky by 11 per cent of respondents and women by 10 per cent. Thus the proportion of women was not necessarily higher at the "sneaky" pole just because it was lower at the "direct" pole. The responses on the item indicated that women were seen more often as neither direct nor sneaky.

A comparison of the results of the Broverman study with the results in this study on item #24 made this point even more clearly. Broverman concludes that since men had a higher score than women on the "Very dominant pole," women are seen by clinicians as more submissive than men. But while this may appear logical it is not necessarily true.

The use of forced dichotomous responses in the Broverman study allowed only responses of "Very dominant" and "Very submissive"; therefore clinicians descriptions can only be reported in terms of "dominant" and "submissive." In this study, however, the use of five-point scoring revealed that underneath the dominant-male, submissive-female dichotomy described by Broverman, there lies a more complex pattern of responses. In this study men were seen as "dominant" by 70% of the clinicians describing men, but women were seen as submissive by only 26% of clinicians who described them. The majority of clinicians, 68%, saw women neither dominant nor submissive (see item #24, Table 6). In other words clinicians can see men as dominant and not necessarily see women as submissive. The Broverman findings of exclusive categories for men and

women is not supported when there is no forced choice of poles.

Broverman's use of dichotomous categories excludes the possibility of men and women being described androgynously. In the present study, women were seen by clinicians as neither dominant nor submissive. If the clinicians in the Broverman study wished to indicate neither pole they had no choice but to not respond at all. The Broverman study does not report the number of cases in which subjects gave no response. If that proportion were large enough on any particular item, it would limit the inference that could be made from higher or lower scores.

2. The second point of difference concerns the number of items on which the female profile scored higher than the male. Since Broverman does not give the results on individual items some logical deductions are necessary in order to make a comparison. According to the Broverman study, the feminine scores were higher than the masculine scores on only 2 out of the total of 27 male-valued items. Of the eleven bipolar items that were analysed in this study, items (13), (24), (25), (33), (43), (47),, and (50) are from Broverman's male-valued list (see Table I). Out of these seven items, the female profile scored higher on five: (13), (24), (25), (43), and (47). So while Broverman reports higher scores for the feminine profile on only 2 out of 27 items, this study found higher scores on 5 out of 7.

3. The third point of difference with the Broverman study is that on the bipolar items the mean score in this study for the male profile was lower than for the female. The score for the female profile was 53.2 and the male was only 49.8. The difference is however quite without significance since it could be produced by one subject choosing the "unhealthy" over the "healthy" categories for men.

Part 2: Analysis of Extreme Responses, Mid-Point Responses and Missed Responses

A. The Polar Extremes

The BSRQ uses extreme forms of traits to describe men and women. Because of this, the results of the Broverman study are often reported in extreme terms. For example, women are said to be described by clinicians as "very illogical." Since the form of the questionnaire items had a direct effect upon how the results of the study were interpreted, it is important to ask whether the extreme form of the traits used in the items is justified. In other words, would clinicians voluntarily choose the extreme ends of the scale, that is responses (1) and (5) to describe men and women?

Based on the results of this study, the answer to the question is--No. In this study, 29 out of the 38 polar extremes designated by Broverman as "female-valued" were

never chosen by the clinicians to describe women. Less dramatic, but equally significant, 19 out of the 38 "male-valued" poles were never chosen to describe men (see Table 8). This result is in sharp contrast with one of the main implications of the Broverman study. While the Broverman conclusions imply that a majority of clinicians chose to describe men and women in terms of these extremes, this study found that many polar extremes were never used by a clinician to describe a man or woman. Therefore the validity of the formulation of the questionaire items in extreme form is not supported.

B. Responses at the Mid-Point

The most popular response on almost all the stereotypic items was (3), the mid-point of the response scale.

Bipolar items. The popularity of (3) as a response category on the bipolar items can be seen by examining Table 7. In 9 of the 11 items, it is the most common response. Since the mid-point of the scale is also the conceptual zero-point on bipolar items, or the neutral point between the two polar extremes, the results seem to suggest that the subjects wished to avoid making a choice of one pole or the other and made a middle-of-the-road or moderate choice.

Unipolar items. What is not shown by the dichotomous scoring of the data, is that on an equally large proportion of the unipolar items, (3) was also the most frequent

TABLE 8

29 POLAR EXTREMES DESIGNATED "FEMININE" AND "STEREOTYPIC" BY BROVERMAN ET AL. (1970) NEVER CHOSEN BY ANY RESPONDENT IN THIS STUDY TO DESCRIBE WOMEN

Not at all aggressive	Not at all independent
Does not hide emotions	Very emotional
Very submissive	Does not hide emotions at all
Very excitable-minor crisis	Very subjective
Very passive	Very easily influenced
Not competitive	Dislikes math and science
Very illogical	Very gentle
Not skilled in business	Very home oriented
Very sneaky	Very quiet
Does not know way of world	Not at all self confident
Not at all adventurous	Unable to separate feelings from ideas
Cries very easily	Very religious
Not at all ambitious	Never acts as a leader

19 POLAR EXTREMES DESIGNATED "MASCULINE" AND "STEREOTYPIC" BY BROVERMAN ET AL. (1970) NEVER CHOSEN BY ANY RESPONDENT IN THIS STUDY TO DESCRIBE MEN

Very aggressive	Not at all easily influenced
Not at all emotional	Not aware of feelings of others
Very objective	Very little need for security
Not at all talkative	Easily separates feelings from ideas
Very blunt	Does not enjoy art and literature
Very rough	Never conceited about appearance
Very worldly	Very little need for security
Feelings not easily hurt	Not at all dependent
Not interested in appearance	
Very sloppy in habits	
Very loud	

response. The only unipolar items on which the mode response for all three descriptions was not (3) were items #4, #28, #42, #64, and #100. The best explanation for the popularity of (3) on the unipolar items seems to be that the subjects treated the unipolar items as if they were conceptually bipolar. Several subjects reported that they chose response (3) because they wished to avoid extremes, and because they believed it to be a neutral response. If by neutral they meant the zero-point, which is the neutral point on bipolar items, then they should have chosen (1) more frequently since on most of the unipolar items the zero point for the trait is at (1). Perhaps the mixture of bipolar and unipolar items was confusing to the subjects. They may have interpreted unipolar items as bipolar simply because the continuum has a label at each end. It is certainly plausible that the subjects could make this error, since it is the same error that was made by the Rosenkrantz et al. (1968) research group when they formulated the items.

Implications for the Broverman study and this study. The fact that the subjects favored the mid-point of the response scale on unipolar and bipolar items equally often, although the conceptual zero-point on the unipolar items was usually the left-hand pole, and only on the bipolar items was it in fact (3), suggests that the form of the items as well as the degree of the trait used to label the ends of the continuum can strongly influence or shape how the subjects

describe men and women.

For example, item #21 is a unipolar item which reads "Very aggressive--Not at all aggressive." Since the mode response is (3) this study had to conclude that the subjects viewed both men and women as somewhat aggressive. If the same item had been bipolar, it might have read "Very aggressive--Very submissive," and the subjects choice of (3) would have been interpreted as indicating that the subjects saw men and women as neither aggressive nor passive. In this way the meaning of the subjects responses could be manipulated by simply changing items from unipolar to bipolar and vice versa.

The implications for the Broverman et al. (1970) study are that the form as well as the content of the BSRQ items has an effect on the responses of the subjects. Does "Not at all aggressive" the zero point of item #21 mean the same as "Neither aggressive nor passive"? Does it have the same connotation to the subjects in the study? If the questionaire item used by Broverman had read "Very aggressive-Very passive" would their subjects have chosen "Very passive" as frequently as they chose "Not at all aggressive"? Could Broverman then with equal confidence report that women were described as "Very passive"? Since the researchers arbitrarily formed bipolar and unipolar items in the earlier (1968) study and intermixed them in the questionnaire had they equally arbitrarily formulated the items differently they would have created different results.

Had the original Rosenkrantz Stereotype Questionnaire really been made up of bipolar items, different female and male-valued poles would have been established.

If it is a general phenomenon that subjects can be confused by a mixture of bipolar and unipolar items, surely a minimum requirement of the BSRQ is that it be consistent in the form of its items. Until that consistency is established, results obtained using this questionnaire are very difficult to interpret.

C. The Incidence of Missed Responses

The incidence of missed responses in this study was very low. The following tabulation gives the item number followed by the number of missed responses.

Unipolar items: #6 - 1, #87 - 2, #95 - 2, #100 - 2, #101 - 1, #105 - 1, #106 - 1, #107 - 1, #114 - 1, #115 - 1.

Bipolar items: #80 - 1 missed response.

The use of the five-point scale apparently gave the subjects an adequate range in which to describe men, women and adults. A high rate of missed responses might indicate that the subjects found themselves unable to record their subjective responses using the categories provided and the data produced, in the way, would not be a valid sample of their actual responses.

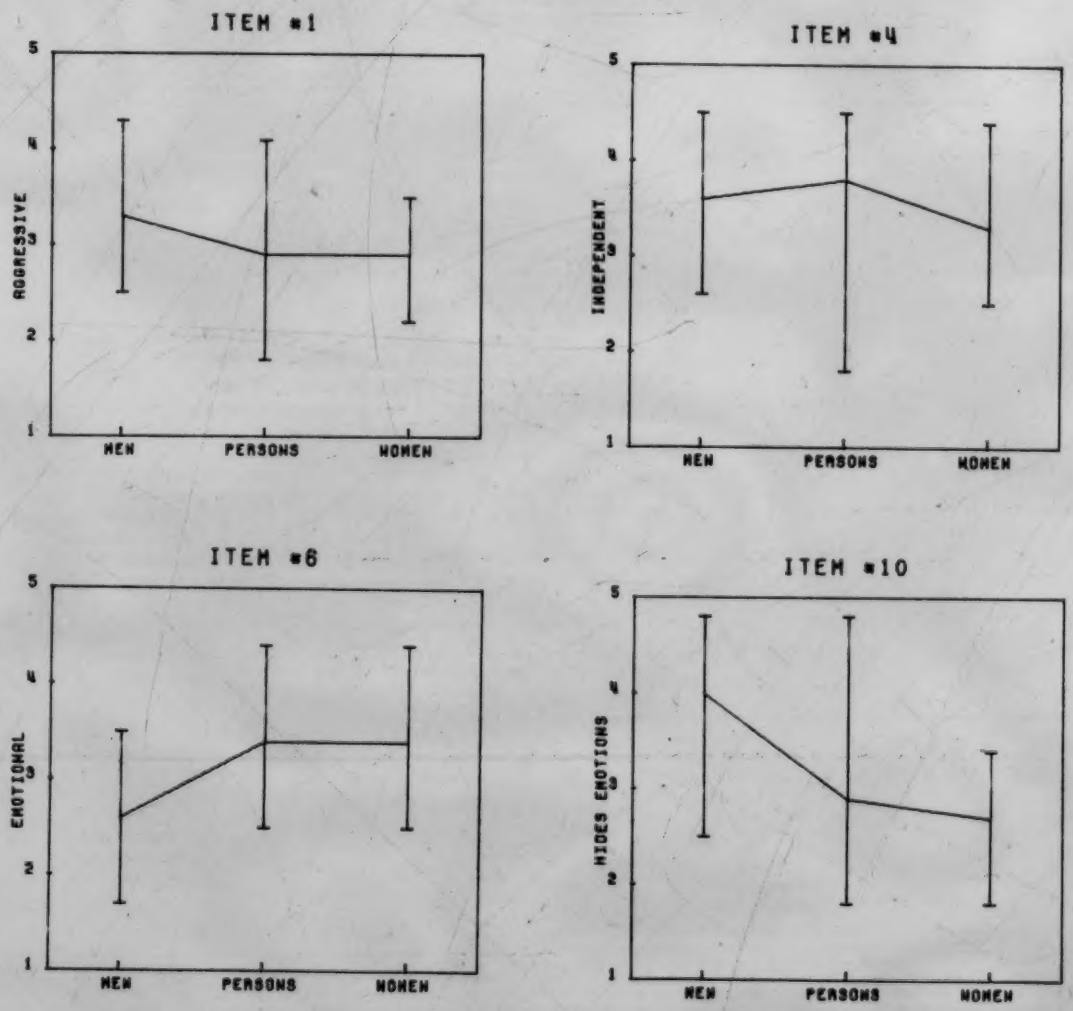
Part 3: Analysis of 38 Stereotypic Items Using the Five-point scale

The subjects' responses to the 38 stereotypic items on the five-point scale are shown in Table 9. The medians

TABLE 9

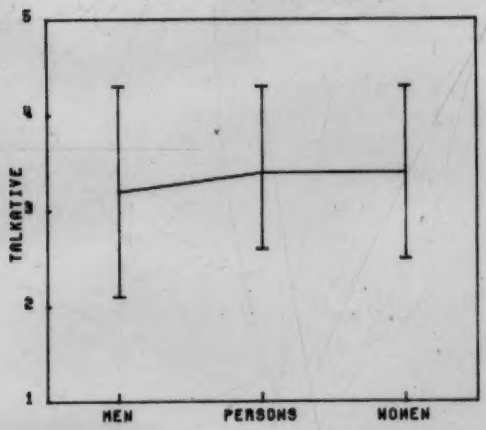
A COMPARISON OF SUBJECTS RESPONSES TO MALE, ADULT PERSONS AND FEMALE INSTRUCTIONS SHOWING THE MEDIAN AND MEANINGFUL RANGE*

Unipolar items



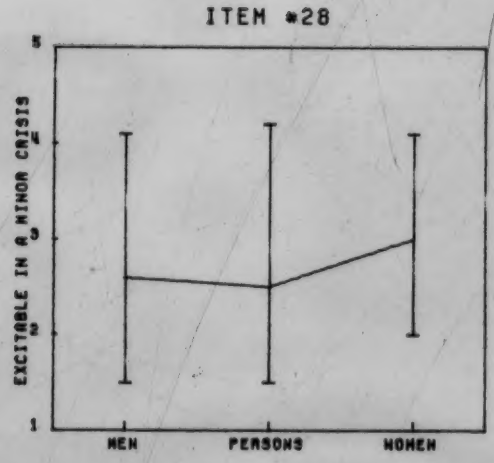
*Responses in each category were assumed to reside equidistant from each other along each response interval. The two most extreme responses were dropped from either end and the upper and lower limits adjusted accordingly.

ITEM #18



ITEM #19

ITEM #28



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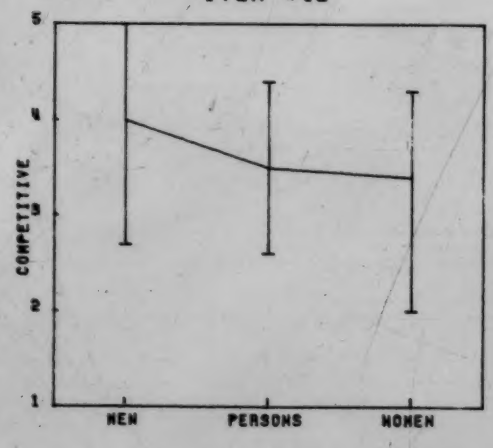

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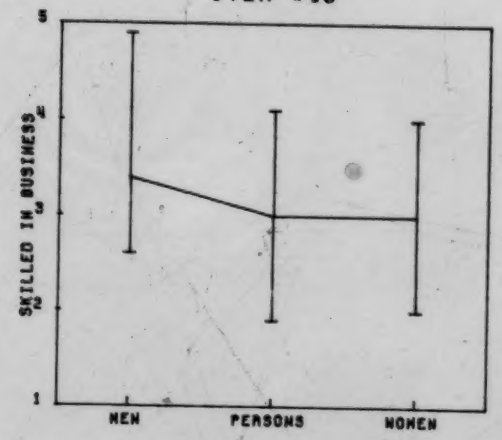

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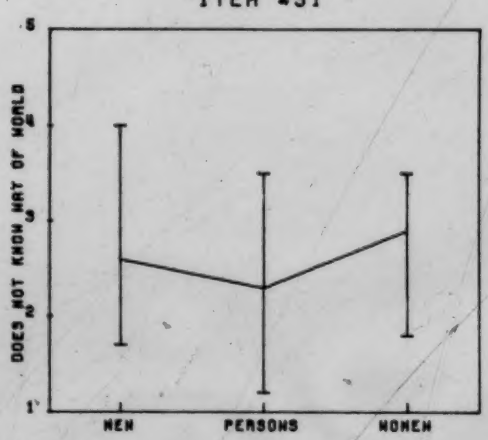

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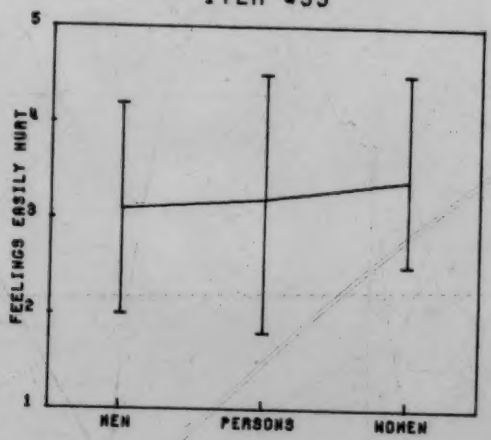

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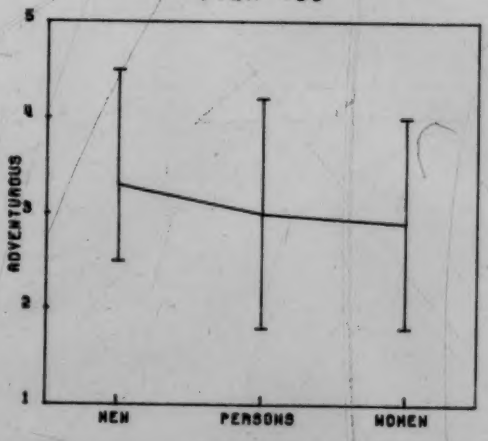

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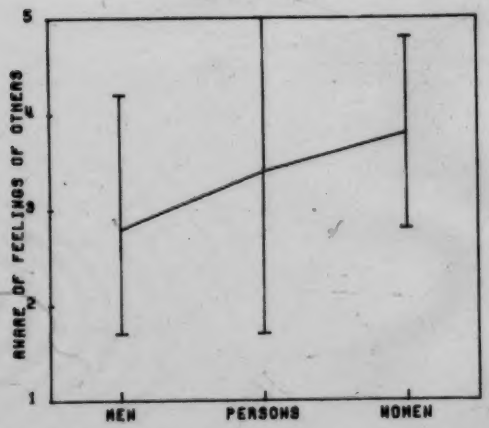

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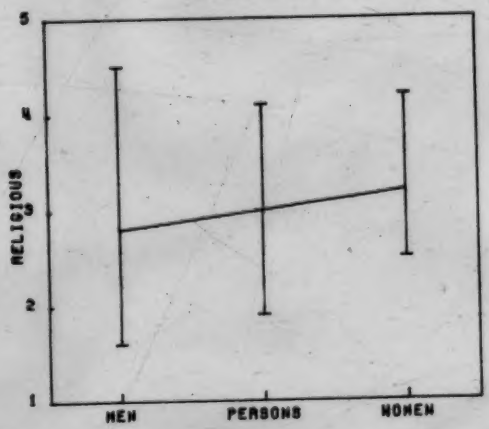

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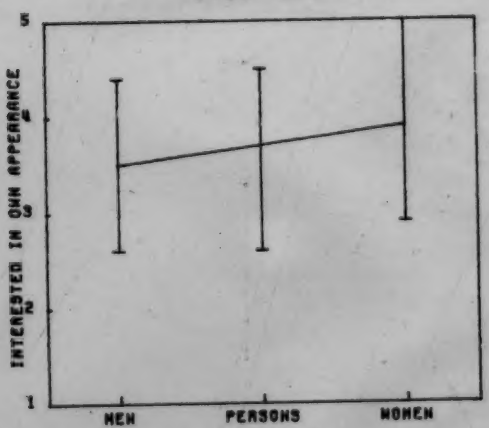

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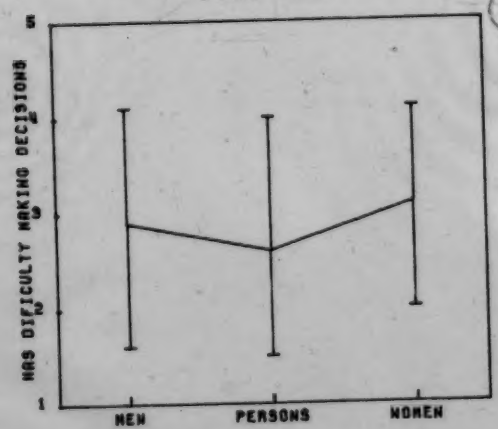

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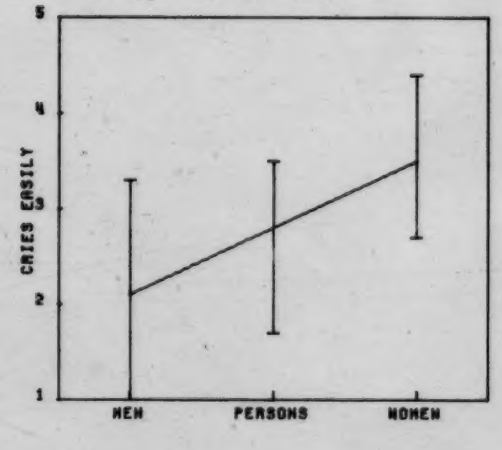

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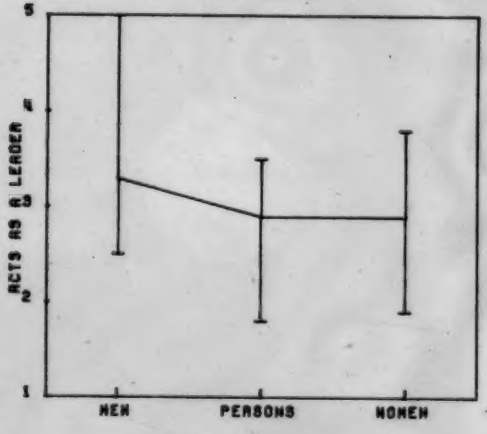

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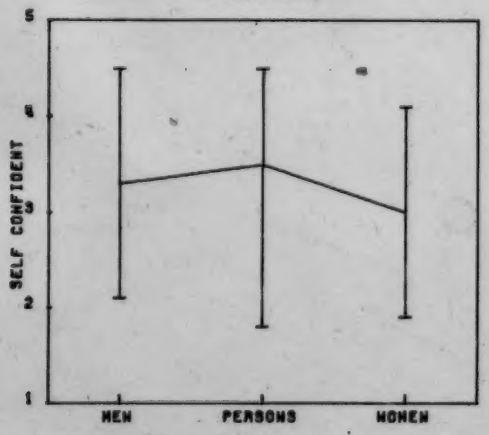

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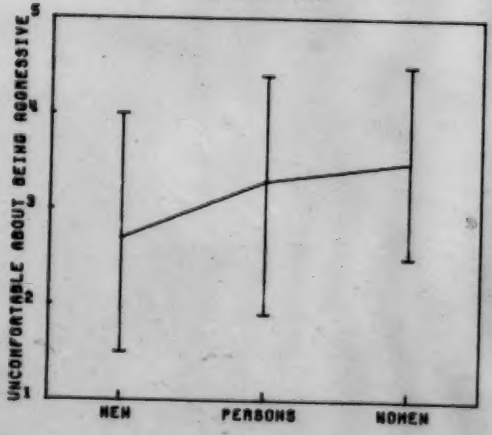

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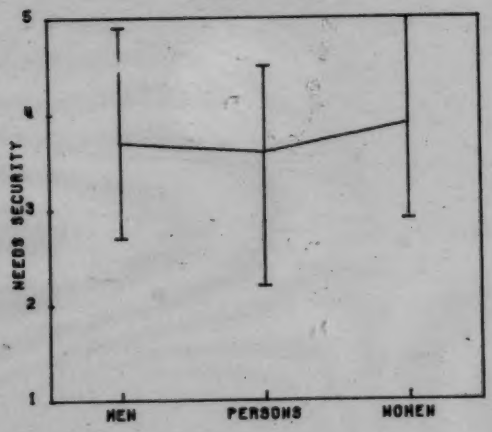

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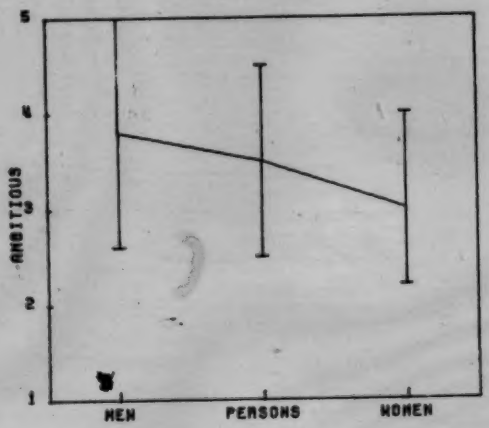

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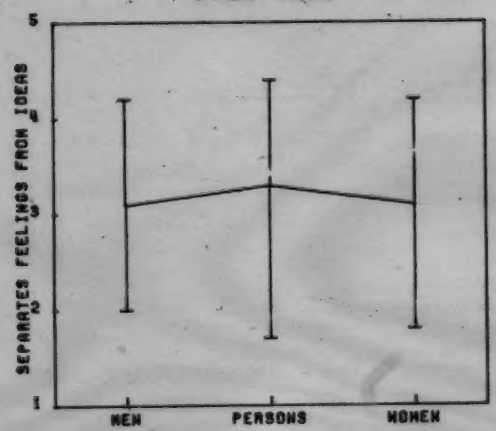

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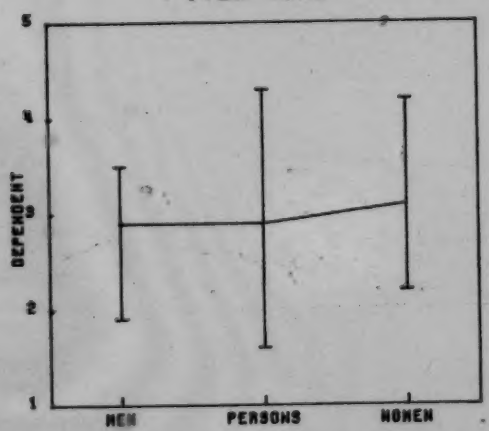

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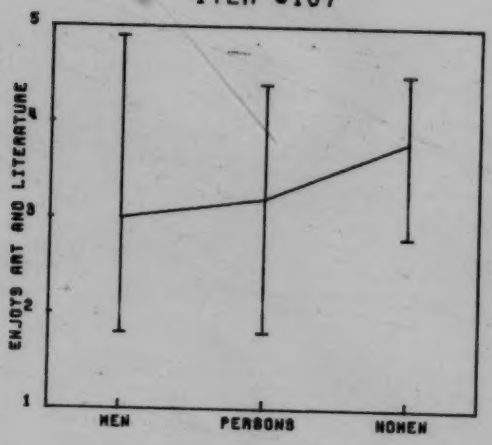

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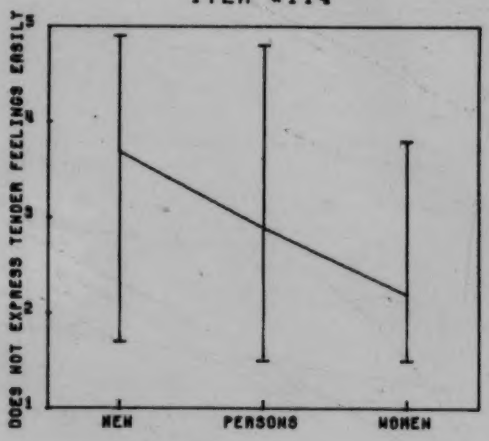

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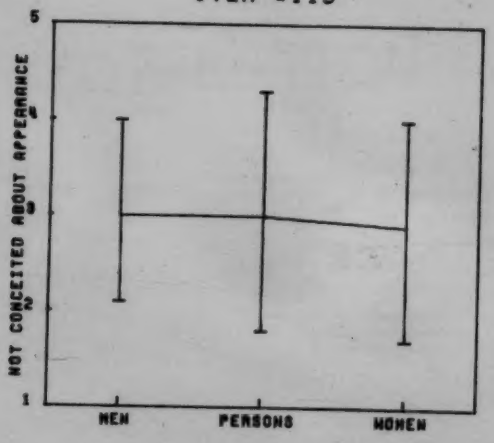
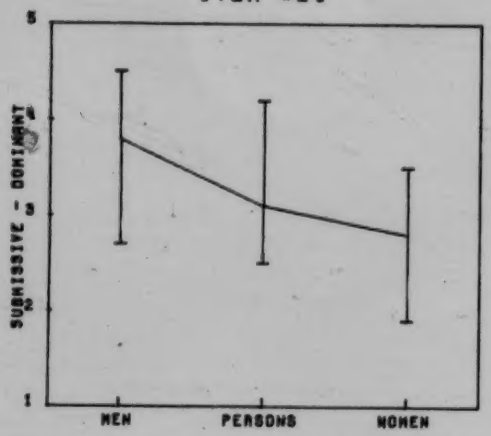


Bipolar Items

ITEM #13

ITEM #24



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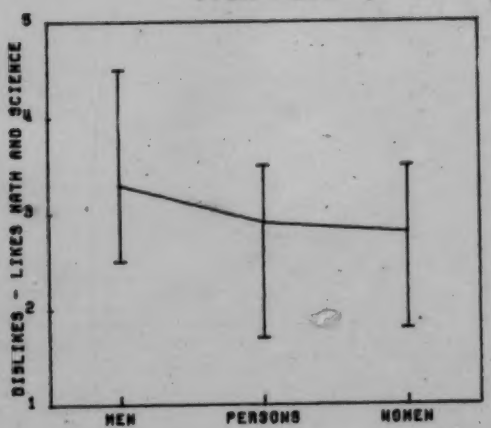

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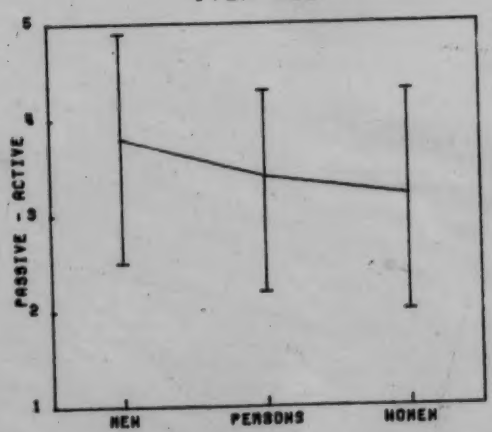
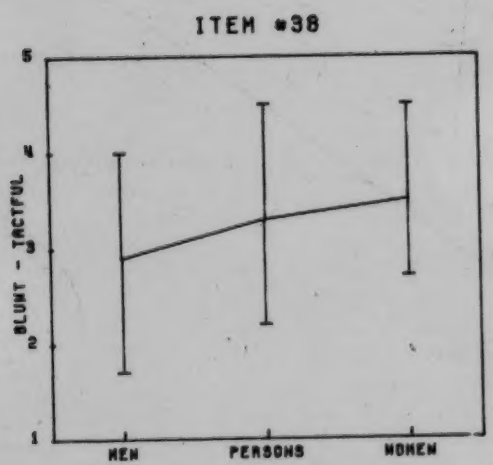
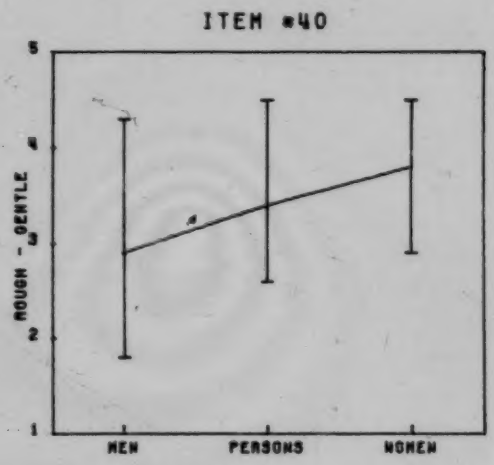
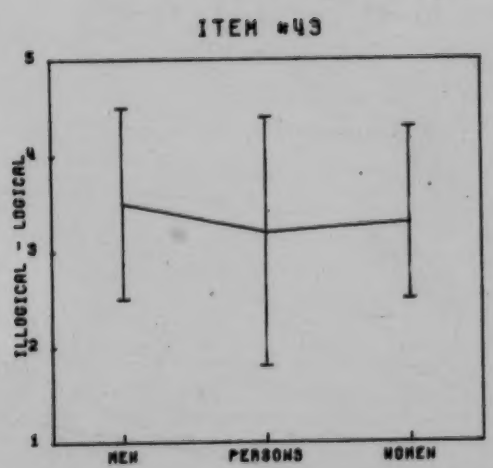
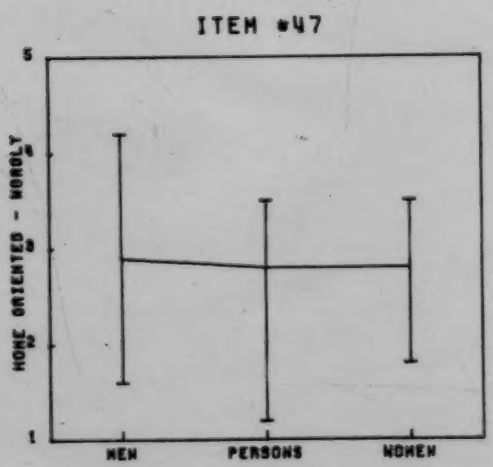


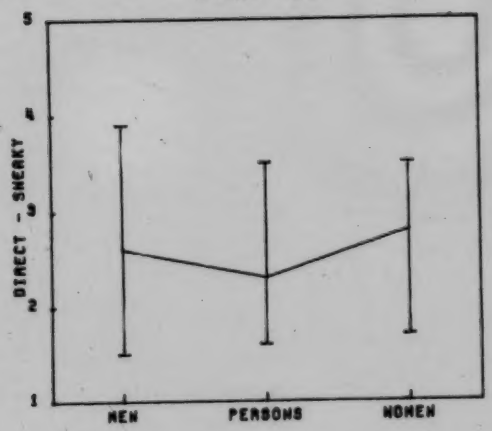

ITEM #38
5
4
3
2
1
BLUNT - TACTFUL
MEN
PERSONS
WOMEN


ITEM #40
5
4
3
2
1
ROUGH - GENTLE
MEN
PERSONS
WOMEN

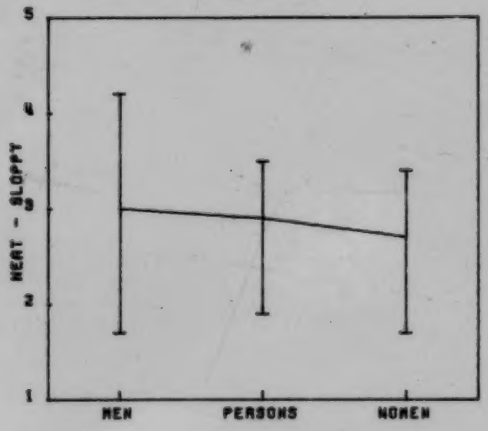

ITEM #43
5
4
3
2
1
ILLOGICAL - LOGICAL
MEN
PERSONS
WOMEN


ITEM #47
5
4
3
2
1
HOME ORIENTED - WORLDLY
MEN
PERSONS
WOMEN

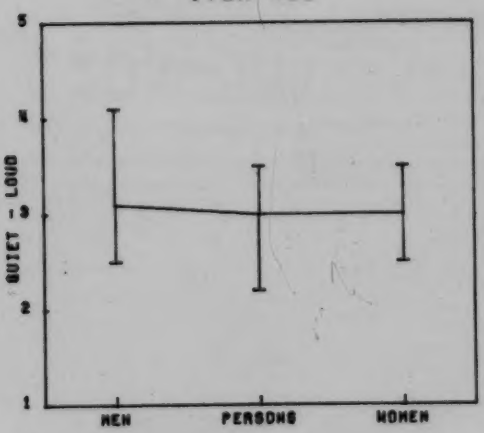
ITEM #50



ITEM #80



ITEM #81



of the three descriptions are indicated by a line which joins them in order to make a visual comparison easier.

Of the three descriptions, it is the description of adult persons that has the largest range of responses on most of the items. In fact the range of the description of adults is large enough to span the descriptions of men and women on 13 of the items: #4, #10, #19, #28, #38, #55, #60, #66, #87, #95, #105, #106, and #115. On each of these items the range of behaviors and attitudes considered healthy for men and women is a subset of those considered healthy for adults.

The differences between the medians for the descriptions of women and men are in the stereotyped direction on all items, except #5, where the medians indicate an identical ability to "separate feelings from ideas." However, the differences found in this study do not support the dichtomous polar extremes used in Rosenkrantz et al. (1968) and Broverman et al. (1970) in reporting their results. In this study the differences between the descriptions of men and women were not large. The greatest difference between the medians was on items #73 "cries easily" (1.4), #114 "does not express tender feelings easily" (1.5) and #60 "aware of feelings of others (1.0).

Broverman's conclusions that men are seen to be like adults and that women are expected to be less "healthy" was also not supported by this data. On seven of the items, the medians for women and the medians for adults were identical:

#1 "aggressive," #6 "emotional," #18 "talkative," #47 "home-oriented," #49 "skilled in business," #75 "acts as a leader," #81 "neither quiet nor loud." On 13 other items, the medians for women are closer to the medians for adults than the medians for men are (see Table 10). If we followed Broverman's method of interpretation, we would conclude that women are seen more like adults than men are. However, there is more than one trend visible in this data and we must also recall that the range of choices made for men was wider than that for women. While the analysis used in this study does not lead to a neat and tidy conclusion, it does seem to be an advantage to have a more detailed presentation of data and a more complex picture of the clinicians' views than was possible in the Broverman study where only means of item means were made available.

The clinicians' description of a healthy adult differed from the "health" profile found by Broverman et al. (1970). Since the items differ conceptually the unipolar items will be discussed first. In this study a range of responses was allowed and the median trait level chosen varied from item to item. On 6 items the median response was 3.5 or higher. The median is given in parenthesis. The clinicians were in favor of independence, (3.8), interest in own appearance (3.7), need for

TABLE 10

MEDIANS AND DIFFERENCES BETWEEN MEDIANS FOR DESCRIPTIONS OF MEN, WOMEN AND ADULT PERSONS ON THE 38 STEREOTYPIC ITEMS

Item No.	Median for Men	Difference	Median for Adults	Difference	Median for Women
1*	3.3	0.4	2.9	0	2.9
4	3.6	0.2	3.8	0.5	3.3
6*	2.6	0.8	3.4	0	3.4
10*	4.0	1.1	2.9	0.2	2.7
13*	3.5	0.7	2.8	0.1	2.9
18*	3.2	0.2	3.4	0	3.4
19	2.8	0.1	2.7	0.5	3.2
24*	3.8	0.7	3.1	0.2	2.9
25*	3.3	0.4	2.9	0.1	2.8
28	2.6	0.1	2.5	0.5	3.0
33*	3.8	0.4	3.4	0.2	3.2
38*	2.9	0.4	3.3	0.2	3.5
40*	2.9	0.5	3.4	0.4	3.8
42*	4.0	0.5	3.5	0.1	3.4
43*	3.5	0.3	3.2	0.1	3.3
47*	2.9	0.1	2.8	0	2.8
49*	3.4	0.4	3.0	0	3.0
50	2.6	0.3	2.3	0.5	2.8
51	2.6	0.3	2.3	0.6	2.9
55	3.1	0.1	3.2	0.2	3.4
59*	3.3	0.3	3.0	0.1	2.9
60*	2.8	0.6	3.4	0.4	3.8
61	2.8	0.2	3.0	0.2	3.2
64	3.5	0.2	3.7	0.2	3.9
66	2.9	0.3	2.6	0.5	3.1
73	2.1	0.7	2.8	0.7	3.5
75*	3.3	0.4	2.9	0	2.9
80	3.0	0.1	2.9	0.2	2.7
81*	3.1	0.1	3.0	0	3.0
87	3.3	0.2	3.5	0.5	3.0
95*	2.7	0.6	3.3	0.2	3.5
100	3.7	0.1	3.6	0.3	3.9
101	3.8	0.3	3.5	0.5	3.0
105	3.1	0.2	3.3	0.2	3.1
106	2.9	0	2.9	0.2	3.1
107	3.0	0.2	3.2	0.6	3.8
114*	3.7	0.8	2.9	0.7	2.2
115	3.0	0	3.0	0.1	2.9

* Items on which the median for women is closer than the median for men to the median for adults.

security* (3.6), and ambition, competitiveness, and self-confidence (3.5). In discussing the remaining unipolar items the item numbers are included for convenience in referring to Table 10. If we define a median response of less than 3.5 as indicating a moderate amount of a trait, healthy adults were seen by their clinicians as moderately aggressive (#1), emotional (#6), hiding emotions (#10)*, talkative (#18), easily influenced (#19)*, excitable in a minor crisis (#28)*, skilled in business (#49), not knowing the way of the world (#51)*, easily hurt (#55)*, adventurous (#59), aware of others feelings (#60), religious (#61)*, having difficulty making decisions (#66)*, easy to cry (#73)*, acting as a leader (#75), uncomfortable with being aggressive (#95)*, able to separate feelings from ideas (#105), dependent (#106)*, enjoying art and literature (#107), not expressing tender feelings easily (#114)*, and not conceited about personal appearance (#115). This presents an altogether very human picture, somewhat in contrast to the much tougher picture presented in the Broverman study.

If we use the medians to define the responses, none of the responses is the same as responses reported by

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* Items on which the tendency chosen was opposite to that reported by Broverman et al. (1970) (see Table I in this study).

Broverman because while the clinicians in the present study chose, for example, "moderately aggressive" to describe healthy adults, in the Broverman study the clinicians could only choose one pole or the other and the "Very aggressive" pole was chosen. We can see however the choices of clinicians in this study represent at least an agreement about tendencies. We find outright disagreement on those items marked with asterisks in the above paragraph. These eleven items, along with #100 - "need for security" are all traits the Broverman clinicians did not choose. For example on item #10, "Does not hide emotions at all--Almost always hides emotions," the clinicians' median response in this study was 2.9 which was interpreted as "hides emotions to a moderate degree," while the Broverman clinicians are reported to have chosen "Does not hide emotions at all."

It is important to note that all the items on which there is disagreement are items on which the Broverman clinicians chose the left-hand pole. Since the items are conceptually unipolar and the left-hand pole represents none of the trait, while the right-hand pole represents the trait in an extreme form, only a response of (1) by the clinicians in this study would be equivalent to the choice of left-hand pole by Broverman's clinicians. Only the response of (1) could indicate none of the trait. Responses of (2), (3), (4), or (5) all indicate some of the trait. None of the clinicians in this study chose a response of "none" of the trait. Did the clinicians in the Broverman

study voluntarily choose "none" of the trait, or since it was a forced choice, were they simply voting against the extreme form of the trait. Did they choose "Does not hide emotions at all" because they did not want to choose "Almost always hides emotions"? Or as another example, was "Very aggressive" chosen because "Not at all aggressive" was a totally unacceptable choice?

A note of caution is necessary of course in the interpretation of the unipolar item results in this study as well. Since they were presented in a bipolar form, it is quite possible, as discussed in Part B of this chapter, that the subjects may be showing more of a preference for moderation than a real choice of a trait level.

On the bipolar items a median response of (3) represents a choice of neither trait. If we define a median response of 0.1 or 0.2 on either side of the mid-point as showing a slight preference for one pole or the other, we can say that clinicians see healthy adults as slightly subjective (#13), dominant (#24), disliking math and science (#25), logical (#43), home-oriented (#47) and neat (#80). If we define a variation of 0.3 and 0.4 on either side of the mid-point as indicating a degree of the trait we could call "somewhat," then the clinicians see adults as somewhat active (#33), tactful, (#38) and gentle (#40). Only one trait varied further than 0.4 from the mid-point and that was "Very direct--Very sneaky"(#50). The clinicians' median response of 2.3 on this item indicated

that they preferred adults to be quite direct. On item #81 they indicated no preference on the "quiet-loud" dimension.

On these bipolar items there was more agreement with the choices of the Broverman clinicians. In fact the only differences were that the Broverman clinicians chose "Very objective" (#13), "Likes math and science very much" (#25), and "Very worldly" (#47) for healthy adults which contrast with three of the clinicians' choices in the present study reported above. The differences in this case are again exaggerated by the fact that the clinicians in the Broverman study could only choose the extreme forms of the traits.

Part 4: Conclusions

There were six questions asked by this study. They fell into two categories based on dichotomous or five-point scoring.

The questions are answered below based on the data generated by this study. Where relevant the issue of support or non-support for the Broverman findings is dealt with.

A. Dichotomous Scoring

1. When dichotomous scoring was used on the unipolar items the descriptions for men, women and adults were almost identical (see Table 5). This fails to support the Broverman conclusion that adult traits are more often assigned to men than women, however, the results are not really

comparable. What these results do suggest is that there are serious problems with the use of dichotomous scoring on unipolar items.

On the bipolar items, the proportion of subjects who described women by the adult category was higher than the proportions of subjects describing men by the adult category (see Table 7). This was contrary to the Broverman findings.

2. On the unipolar items the almost complete consensus was a function mainly of the scoring method (see Table 5). Since responses of (2), (3), (4), and (5) were all interpreted as left-hand pole in the dichotomous scoring, there is no real measure of consensus, we have assumed for our convenience that these responses all mean the same thing.

On the bipolar items the least consensus was on the description of women on item #33 "active-passive." The most consensus appeared also on the description of women and it was on item #81 "Very quiet--very loud" (see Table 6). However since the highest agreement on the male and the adult person profile was also on item #81, the meaning of the high agreement seems to be: the clinicians all agreed that neither loudness or quietness was more typical of normal men, women or adult persons. And if we look at the percentages of agreement for all eleven bipolar items and calculate mean scores, as Broverman did, the agreement score for adults is the lowest at 60.0, women are next at 61.4, and men have the highest agreement score at 67.3. Broverman also found a

higher agreement score on the profile for men than the profile for women. Again this finding suggests less agreement about what is appropriate for women, and perhaps a lower proportion of stereotyped responses than on the description of men.

With the exception of item #81 discussed above, the highest consensus were on items #70 where the clinicians felt men were "dominant" and #33 where men were "active." The only strong agreement about women was their tendency to be "gentle" and "neither" dominant nor submissive.

Only the description of women on item #40, "gentle--rough,"" with an agreement score of .74 is close to the original definition of stereotyping by Rosenkrantz which required a 75% agreement about which pole was male and which female. The results of the bipolar items in Table 6 show no stereotyped items.

B. Scoring on the Five-Point Scale

1. Only 9 of the polar extremes designated feminine stereotypic by Broverman were ever used by any respondent to describe women, and only 19 of the masculine stereotypic polar extremes were used by any respondent to describe men. The proportion choosing these polar extremes were always small (see Table 8). Broverman's use of the extreme forms of traits is not supported.

2. The medians of the descriptions of men and women were never at different ends of the continuum. The similarity between the descriptions was more noticeable than

the differences. The medians differed by one response category or more on only two of the scored items. On item #10 men were seen to hide their emotions more than women by a difference of 1.3 response categories, and on item #60, women were seen as more aware of their feelings than men by a difference of 1.0. Broverman's conclusions that men and women are characterized by dichotomous bipolar extremes is not supported.

3. The medians are closer for men and persons on only 14 items, the same distance on four, and closer for women and persons on 20 items. This is not a convincing difference, but it is a clear failure to support the Broverman conclusion that clinicians see men and adults as similar and women as different from adults.

CHAPTER VI

DISCUSSION, IMPLICATIONS AND CONCLUSION

In order to arrive at some general conclusions, it is necessary to evaluate the evidence presented in the previous chapters and look at how that evidence bears upon the issue of the validity and generalizability of the Broverman et al. (1970) study of sex-role stereotyping by clinicians. In addressing this issue, this study has presented two types of evidence: a critique of the Broverman research, and a replication of that research.

In order to sharpen the focus of the discussion, the summation will focus exclusively on Broverman et al. (1970). Since the critique of Rosenkrantz et al. (1968) was incidental to this study and not the main focus, it will not be re-evaluated here.

It is customary in the discussion section simply to review the points made in the earlier critique of the Broverman research, but the very detailed and technical nature of that critique makes a simple resume of it difficult to accomplish. By way of a summation, a more general critique of the 1970 article by Broverman et al. is offered.

Critique

In 1978, the Journal of Consulting and Clinical Psychology, the same journal that published the Broverman

research in 1970, published "A Reader's, Writer's, and Reviewer's Guide to Assessing Research Reports in Clinical Psychology" (Maher, 1978). Using that checklist, the Broverman article is evaluated below, on the basis of the applicable items in the sections entitled "Method," "Statistics," "Figures and Tables," and "Discussion and Conclusion." The items in the "Introduction" section of the checklist are not included here because an assessment of the Broverman hypothesis was excluded from the earlier critique for the sake of brevity and it does not seem appropriate to introduce it at this point. In the section to follow, the applicable checklist items are quoted first, and a brief comment assessing the Broverman research follows.

Method

"1. Is the method so described that replication is possible without further information?"

The method was not adequately described. Additional information was necessary in order to replicate.

"2. Subjects: Were they sampled randomly from the population to which the results will be generalized?"

Subjects were not sampled by a random method.

"4. Are there probable biases in sampling (e.g., volunteers, high refusal rates, institution population atypical for the country at large, etc.)?"

There is a bias in sampling in that the subjects were self-selected and the persons distributing the questionaires were on the one hand volunteers, and the other, all students of Inge Broverman.

"5. What was the "set" given to subjects? Was there deception? Was there control for experimenter influence and expectancy effects?"

We do not know what "set" was given the subjects by the volunteers who asked them to do the questionnaire.

"12. Measures: For both dependent and independent variable measures--was validity and reliability established and reported? When a measure is tailor-made for a study, this is very important. When validities and reliabilities are already available in the literature, it is less important."

The measures used were not shown to have validity or reliability.

"13. Is there adequate description of tasks, materials, apparatus, and so forth?"

The letter of explanation that accompanied the questionnaire and the format of the questionnaire items used, were neither provided in the article, nor available from the authors.

"14. Is there discriminant validity of the measures?"

Discrimination validity was not discussed, and in fact no

criterion for determining differences was established.

"16. Are measures free from biases such as

a. Social desirability?

b. Yeasaying and naysaying?

c. Correlations with general responsivity?

d. Verbal ability, intelligence?"

a. The questionnaire included more items with socially desirable male poles than with socially desirable female poles.

b. The "Very" end of items was almost always at the left and the "Not at all" end was at the right.

Statistics

"1. Were the statistics used with appropriate assumptions fulfilled by the data (e.g., normalcy of distributions for parametric techniques)? Where necessary, have scores been transformed appropriately?"

Means were compared using t tests even though the items making up those means were not shown to be independent.

"2. Were tests of significance properly used and reported? For example, did the author use the p value of a correlation to justify conclusions when the actual size of the correlation suggests little common variance between two measures?"

Seventy per cent of the items scored were "male-valued." Rather than explaining why the "social desirability" score for the masculine poles was only .65, the authors compared the .65 score to .50 to show that it was "significantly" different from chance.

"3. Have statistical significance levels been accompanied by an analysis of practical significance levels?"

There was no attempt to relate statistical significance levels to practical significance levels. No actual differences on item means for the three profiles were reported. Results were reported only as clearly different choices.

"5. Is the basic statistical strategy that of a "fishing expedition"; that is, if many comparisons are made, were the obtained significance levels predicted in advance? Consider the number of significance levels as a function of the total number of comparisons made."

No criteria were established to define a choice of poles. Comparisons of statistics and the composition of statistics to have been chosen on an ad hoc basis.

Figures and Tables

"1. Are the figures and tables (a) necessary and (b) self-explanatory? Large tables of nonsignificant differences, for example, should be eliminated if the few obtained

significances can be reported in a sentence or two in the text. Could several tables be combined into a smaller number?"

Table 1 is misleading. It presents material from the Rosenkrantz study in a way that makes it appear to be data from the Broverman study.

Discussion and Conclusion

"1. Is the discussion properly confined to the findings or is it digressive, including new post hoc speculations?"

The discussion is digressive and includes new post hoc speculations.

"2. Has the author explicity considered and discussed viable alternative explanations of the findings?"

Viable alternative explanations of the findings are not discussed.

"3. Have nonsignificant trends in the data been promoted to "findings"?"

Non significant trends may have been promoted to findings. We do not know. The t tests are inappropriate and there is not enough evidence for the reader to make a sound judgement.

"4. Are the limits of the generalizations possible from the data made clear? Has the author identified his/her own methodological difficulties in the study?"

The limits are the generalizations are not made clear.

After noting all these flaws in the research, the obvious question is: Would the Journal of Consulting and Clinical Psychology or any other prestigeous journal publish the Broverman article if it were submitted today? Of course we do not know the answer. We may, however, have some hint in Smith's (1980) conclusion based on her overview of the literature on sex-bias in counseling, that the finding of sex-bias has in the past outweighed design flaws in determining whether or not studies were published (p. 406).

It is the conclusion of this present study that the cumulative effect of the many methodological flaws in the Broverman research cast a more than considerable doubt on its validity and generalizability. The data presented do not increase our confidence in the researchers' charges that clinicians practice sex-bias in therapy. However, the fact that the study is flawed and cannot be used evidentially does not mean the Brovermans' conclusions are false. But since we can have little confidence in their findings, we are left simply without data on either the prevalence or the specific nature of sex-bias in therapy.

Replication

In the second part of this study the BSRQ was administered to a randomly selected sample of the psychiatrists, social workers, and psychologists registered in the Province of Alberta. Modified instructions were used asking subjects to describe a normal male, female or adult person. A five-point scale was used for responses.

The results did not support Broverman's conclusions that clinicians hold "clearly defined" stereotpyes of men and women. There was a great deal of overlap in the responses to male, female and adult instructions, and in general clinicians tended not to use the extremes of the scales to describe anyone. Broverman's finding that clinicians see men like adults and women as different from adults was also not supported. In fact, on just over half of the items the median of the description of women was closer to the median for adults than the median for men was. Thus the conclusions that clinicians hold "clearly defined" stereotypies and that they assign more positive traits to men than to women were not supported by the results of this study.

However, the replication did find that the descriptions of men and women were different and often in a stereotyped direction. This is not a surprising finding since the items scored were pre-selected by the Rosenkrantz (1968) study for their power to differentiate between conceptions of

men and women. The differences found varied from item to item and there was no attempt made in this study to determine the practical significance of these differences. Because of the limitations of the BSRQ as an instrument of measurement, no further interpretation was made of the findings.

Implications

A review of the literature revealed that the study by Broverman et al. has not only been accepted as definitive, but its findings have been generalized to Canadian therapists and applied to the 1980's. For example, a resource kit published by Health and Welfare Canada in 1978, and used by the Alberta Drug and Alcohol Abuse Commission, for public education programs, states in a flip chart that: "Physicians [sic], social workers, and psychologists say:... A healthy woman is more submissive, excitable, emotional and less aggressive, independent, objective than a healthy man" (Caucus on Women and Alcohol and Drugs, 1978, p. 15).

The fact the conclusions of the Broverman study fit so easily into a public education program leads one to speculate that one of the reasons that the study has been so widely cited is the seemingly simple and clear cut nature of its conclusions. In other words, what is a methodological weakness in the study, has made it easy to quote and useful to writers of textbooks and flip charts. It is to the credit of the professional women who designed the flip chart cited above that with the exception of the rather serious

substitution of "physicians" for "psychiatrists," they have cited Broverman quite accurately.

What is inexcusable is the uncritical acceptance and serious misinterpretation of the Broverman study in the academic literature. Unless we accept the suggestion by Harris (1979) that authors' descriptions of research are greatly influenced by the opinions they already hold (p. 157), it is almost impossible to understand how so many of them could have failed to see at least some of the very numerous flaws in the study. Perhaps those who quoted the study so enthusiastically had already made up their minds on the issue of sex-bias in therapy.

Granted the steps involved in Broverman's methodology are numerous and not easy to follow, in fact sorting out the steps was a tortuous task and not every researcher has the time for such an arduous process, however, the average researcher should at the very least be sensitive to some of the more general signs that indicate a research project may require a critical reading or a very cautious interpretation. Surely research begs a second look when it reports clear-cut results, uses unjustifiably complex statistics, shows a lack of contradictory findings, or uses a highly emotional tone. The Broverman study has all these potential warning signs, yet the majority of writers have cited it uncritically.

While clearly not the cause of the problem, a situation that certainly can contribute to errors in citations is the convention of citing whole works rather than a specific page

to support the writer's statement. There is a lack of clarity about the function of reference notes. Many citations, while presented in the style of reference notes, are not reference notes at all but arguments from authority used to legitimize the research presented. The Broverman paper presents, among others, in the same list of citations, a research paper by McKee & Sherriffs (1957) that is highly related to the research they are about to present and an opinion paper by Komarovsky (1950). They, like many other researchers, fail to make a distinction between arguments from authority and evidential arguments. While the standard practice is to call all citations reference notes, surely a true reference note is one that offers the reader a more detailed presentation of a supporting or contradictory viewpoint, than the space of a journal article allows. Perhaps it is because the convention within psychological research requires that introductions present a justification or legitimization, called the "background," that authors rather uncritically list sources to fill the requirement of form. Because such a general and non-specific use of citation is accepted, inaccuracies can easily creep in that are difficult to challenge.* In this study authors were found who made up their own words to describe the findings of Broverman and these produced distortions (for

* See for example Samelson's discussion of Allport's misquote of Comte (Samelson, 1974, p. 218).

example see Fodor, 1974, p. 133; Steinmann, 1974, p. 77). If citations were made with more precision some of these errors would be prevented.

Conclusion

The replication done in this study provided no support for applying the conclusions of Broverman et al. (1970) to clinicians currently practicing in Alberta. However, it cannot be used evidentially to disprove Broverman's conclusions about the American clinicians sampled in 1970. Findings in social psychology have a limited applicability: results of this study carried out in 1981 do not necessarily apply to 1970. Attitudes may indeed have changed over the span of 10 years. Training programs for clinicians may have become aware of the Broverman research and attempted to counteract sex-role stereotyping. Public education may have changed attitudes in general.

Above all we must remember that we do not know how sex-role stereotyping in attitudes affects clinical practice. The findings in the literature are equivocal (Smith, p. 406) and neither the Broverman study nor this replication gives any information about differences in therapist's treatment of male and female clients. The findings of this study indicate that differences in attitude may exist, and that some may be in women's favor.

The first step in learning about sex-bias in therapy is to accept the fact that the Broverman study does not provide

empirical proof of that bias. Future research should not rely on the BSRQ because, as the critique in Chapter II and in the beginning of this chapter shows, it is not an adequate instrument to investigate sex-bias in therapy. It suffers from serious design flaws and it tests only attitudes. Perhaps the issue of sex bias in therapy can only be studied by analysing real therapeutic interviews.

The main point of the present study, is that the study by Broverman et al. (1970) cannot be used evidentially to draw conclusions about the behavior of American clinicians in 1970, and certainly not about clinicians practicing in Alberta in 1981.

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APPENDIX

February 6th, 1981

Dear Respondent:

I would like your assistance in this study of mental health concepts of professionals in the field. I realize that you have many demands on your time and I can assure you that this study has been thoroughly piloted and can be completed in an average time of fifteen minutes.

This research is a replication of a study done in the United States in 1970, and widely cited in both the United States and Canada in textbooks, articles and public education programs. My objective is to obtain information that is current and that is relevant in Alberta. This is in fact a Canadian counterpart to an American study presently underway.

Included in the survey are psychiatrists, psychologists and clinical social workers currently practicing in Alberta. The study is designed to maintain maximum anonymity and total confidentiality. Your responses will appear only in combined data. I trust you will feel comfortable in completing the questiomaire and supplying the related demographic information on the checklist attached to the answer sheet.

Would you kindly return both answer sheets in the envelope provided. Your support and cooperation is very much appreciated.

Yours truly,

Doris Burghardt

INSTRUCTIONS:

1. Think of normal adult persons.

2. Look at the five point scale and choose the number that most closely represents the level of the trait you would expect a normal adult person to have.

3. A response of 1, indicates agreement with the description in the left-hand column. A response of 5 indicates agreement with the right-hand column. Numbers 2, 3 and 4 represent intermediate levels.

4. Using a pencil, blacken the circle on the answer sheet that corresponds to the number of your choice. At the beginning of each page please check to see that the number of the response on the answer sheet corresponds to the number of the item you are answering.

5. Work quickly. Your first impressions are important.

1. Not at all aggressive _____ 1....2....3....4....5 _____ Very aggressive

2. Very irrational _____ 1....2....3....4....5 _____ Very rational

3. Very impractical _____ 1....2....3....4....5 _____ Very practical

4. Not at all independent _____ 1....2....3....4....5 _____ Very independent

5. Not at all consistent _____ 1....2....3....4....5 _____ Very consistent

6. Not at all emotional _____ 1....2....3....4....5 _____ Very emotional

7. Not at all conscientious _____ 1....2....3....4....5 _____ Very conscientious

8. Not at all realistic _____ 1....2....3....4....5 _____ Very realistic

9. Not at all idealistic _____ 1....2....3....4....5 _____ Very idealistic

10. Does not hide emotions at all _ 1....2....3....4....5 _ Almost always hides emotions

11. Does not use harsh language at all ___ 1....2....3....4....5 ___ Uses very harsh language

12. Always honest in expressing emotions __ 1....2....3....4....5 _____ Never honest in expressing emotions

13. Very subjective _____ 1....2....3....4....5 _____ Very objective

14. Mainly interested in details _____ 1....2....3....4....5 _____ Mainly interested in generalities

15. Always thinks before acting __ 1....2....3....4....5 __ Never thinks before acting

16. Actions never represent true feelings _____ 1....2....3....4....5 _____ Actions always represent true feelings

17. Not at all considerate _____ 1....2....3....4....5 _____ Very considerate

18. Not at all talkative _____ 1....2....3....4....5 _____ Very talkative

19. Not at all easily influenced _____ 1....2....3....4....5 _____ Very easily influenced

20. Very ungrateful _____ 1....2....3....4....5 _____ Very grateful

21. Very intolerant _____ 1....2....3....4....5 _____ Very tolerant

22. Does not mind at all when things are not clear _____ 1....2....3....4....5 _____ Minds very much when things are not clear

23. Not at all stubborn _____ 1....2....3....4....5 _____ Very stubborn

24. Very submissive _____ 1....2....3....4....5 _____ Very dominant

25. Dislikes math and science very much _____ 1....2....3....4....5 _____ Likes math and science very much

26. Not at all reckless _____ 1....2....3....4....5 _____ Very reckless

27. Not at all excitable in a major crisis _____ 1....2....3....4....5 _____ Very excitable in a major crisis

28. Not at all excitable in a minor crisis _____ 1....2....3....4....5 _____ Very excitable in a minor crisis

29. Not at all strict _____ 1....2....3....4....5 _____ Very strict

30. Not at all forgiving _____ 1....2....3....4....5 _____ Very forgiving

31. Never punishes _____ 1....2....3....4....5 _____ Punishes often

32. Very weak personality _____ 1....2....3....4....5 _____ Very strong personality

33. Very passive _____ 1....2....3....4....5 _____ Very active

34. Never examines own thoughts _____ 1....2....3....4....5 _____ Always examines own thoughts

35. Not at all capable of complete involvement with the opposite sex _____ 1....2....3....4....5 _____ Capable of complete involvement with the opposite sex

36. Not at all able to devote self completely to others _____ 1....2....3....4....5 _____ Able to devote self completely to others

37. Easygoing _____ 1....2....3....4....5 _____ Ill-tempered

38. Very blunt _____ 1....2....3....4....5 _____ Very tactful

39. Not at all thrifty _____ 1....2....3....4....5 _____ Very thrifty

40. Very rough _____ 1....2....3....4....5 _____ Very gentle

41. Not at all helpful to others _____ 1....2....3....4....5 _____ Very helpful to others

42. Not at all competitive _____ 1....2....3....4....5 _____ Very competitive

43. Very illogical _____ 1....2....3....4....5 _____ Very logical

44. Not at all competent _____ 1....2....3....4....5 _____ Very competent

45. Very theoretical thinking _____ 1....2....3....4....5 _____ Very practical thinking

46. Not at all opinionated _____ 1....2....3....4....5 _____ Very opinionated

47. Very home oriented _____ 1....2....3....4....5 _____ Very worldly

48. Not at all friendly _____ 1....2....3....4....5 _____ Very friendly

49. Not at all skilled in business _____ 1....2....3....4....5 _____ Very skilled in business

50. Very direct _____ 1....2....3....4....5 _____ Very sneaky

51. Knows the way of the world _____ 1....2....3....4....5 _____ Does not know the way of the world

52. Not at all kind _____ 1....2....3....4....5 _____ Very kind

53. Not at all trusting _____ 1....2....3....4....5 _____ Very trusting

54. Not at all willing to accept change _____ 1....2....3....4....5 _____ Very willing to accept change

55. Feelings not easily hurt _____ 1....2....3....4....5 _____ Feelings easily hurt

56. Not at all proud _____ 1....2....3....4....5 _____ Very proud

57. Not at all willing to change one's ways _____ 1....2....3....4....5 _____ Very willing to change one's ways

58. Not at all protective _____ 1....2....3....4....5 _____ Very protective

59. Not at all adventurous _____ 1....2....3....4....5 _____ Very adventurous

60. Not at all aware of feelings of others _____ 1....2....3....4....5 _____ Very aware of feelings of others

61. Not at all religious _____ 1....2....3....4....5 _____ Very religious

62. Never thinks about self _____ 1....2....3....4....5 _____ Always thinks about self

63. Not at all intelligent _____ 1....2....3....4....5 _____ Very intelligent

64. Not at all interested in own appearance _____ 1....2....3....4....5 _____ Very interested in own appearance

65. Not at all outspoken _____ 1....2....3....4....5 _____ Very outspoken

66. Can make decisions easily ____ 1....2....3....4....5 _____ Has difficulty making decisions

67. Not at all concerned with the future _____ 1....2....3....4....5 ____ Concerned with the future

68. Gives up very easily _____ 1....2....3....4....5 _____ Never gives up easily

69. Very shy _____ 1....2....3....4....5 _____ Very outgoing

70. Not at all interested in sex _____ 1....2....3....4....5 _____ Very interested in sex

71. Never does things without being told _____ 1....2....3....4....5 _____ Always does things without being told

72. Very immature _____ 1....2....3....4....5 _____ Very mature

73. Never cries _____ 1....2....3....4....5 _____ Cries very easily

74. Not at all studious_____ 1....2....3....4....5 _____ Very studious

75. Almost never acts as a leader _____ 1....2....3....4....5 _____ Almost always acts as a leader

76. Does not enjoy the company of women _____ 1....2....3....4....5 _____ Greatly enjoys the company of women

77. Does not enjoy the company of men _____ 1....2....3....4....5 _____ Greatly enjoys the company of men

78. Almost never sees things in "black and white" terms _____ 1....2....3....4....5 ____ Almost always sees things in "black and white" terms.

79. Never worried _____ 1....2....3....4....5 _____ Always worried

80. Very neat in habits _____ 1....2....3....4....5 _____ Very sloppy in habits

81. Very quiet _____ 1....2....3....4....5 _____ Very loud

82. Not at all intellectual _____ 1....2....3....4....5 _____ Very intellectual

83. Not at all demanding _____ 1....2....3....4....5 _____ Very demanding

84. Very careful _____ 1....2....3....4....5 _____ Very careless

85. Not at all enthusiastic _____ 1....2....3....4....5 _____ Very enthusiastic

86. Likes to be different _____ 1....2....3....4....5 _____ Wants to be like others

87. Not at all self-confident _____ 1....2....3....4....5 _____ Very self confident

88. Feels very inferior _____ 1....2....3....4....5 _____ Feels very superior

89. Not at all patient _____ 1....2....3....4....5 _____ Very patient

90. Not at all creative _____ 1....2....3....4....5 _____ Very creative

91. Not at all organized _____ 1....2....3....4....5 _____ Very well organized

92. Never avoids disagreements ___ 1....2....3....4....5___ Always avoids disagreements

93. Always sees self as running the show _____ 1....2....3....4....5_____ Never sees self as running the show

94. Not concerned with sexual ability_____ 1....2....3....4....5_____ Very proud of sexual ability

95. Not at all uncomfortable about being aggressive _____ 1....2....3....4....5_____ Very uncomfortable about being aggressive

96. Very poor sense of humor _____ 1....2....3....4....5____ Very good sense of humor

97. Not at all understanding of others _____ 1....2....3....4....5_____ Very understanding of others

98. Very cold in relations with others _____ 1....2....3....4....5_____ Very warm in relations with others

99. Does not care about being in a group _____ 1....2....3....4....5_____ Greatly prefers being in a group

100. Very little need for security _____ 1....2....3....4....5_____ Very strong need for security

101. Not at all ambitious _____ 1....2....3....4....5_____ Very ambitious

102. Very rarely takes extreme positions _____ 1....2....3....4....5_____ Very frequently takes extreme positions

103. Unable to separate sex and love _____ 1....2....3....4....5_____ Easily able to separate sex from love

104. Can wait a long time for a reward _____ 1....2....3....4....5____ Needs rewards immediately

105. Unable to separate feelings from ideas _____ 1....2....3....4....5_____ Easily able to separate feelings from ideas

106. Not at all dependent _____ 1....2....3....4....5_____ Very dependent

107. Does not enjoy art and literature at all _____ 1....2....3....4....5 _____ Enjoys art and literature

108. Not at all cooperative _____ 1....2....3....4....5 _____ Very cooperative

109. Not to be trusted _____ 1....2....3....4....5 _____ Very trustworthy

110. Not at all selfish _____ 1....2....3....4....5 _____ Very selfish

111. Seeks out new experience _____ 1....2....3....4....5 _____ Avoids new experience

112. Not at all restless _____ 1....2....3....4....5 _____ Very restless

113. Very uncomfortable when people express emotion _____ 1....2....3....4....5 ___ Not at all uncomfortable when people express emotion

114. Easily expresses tender feelings _____ 1....2....3....4....5 _____ Does not express tender feelings at all easily

115. Very conceited about appearance _____ 1....2....3....4....5 _____ Never conceited about appearance

116. Always seeking new friends ___ 1....2....3....4....5 _____ Never seeks new friends

117. Makes friends easily _____ 1....2....3....4....5 ___ Does not make friends easily

118. Retiring _____ 1....2....3....4....5 _____ Forward

119. Thinks men are always superior to women _____ 1....2....3....4....5 _____ Thinks women are always superior to men

120. Talks freely about sex with men _____ 1....2....3....4....5 _____ Does not talk freely about sex with men

121. Talks freely about sex with women _____ 1....2....3....4....5 _____ Does not talk freely about sex with women

122. Not at all resourceful _____ 1....2....3....4....5 _____ Very resourceful

123. To answer the previous items you may have used an image to help you choose your responses. Please indicate if one of the following describes the process you used.

(1) I thought of a real person, or a composite of real people, I know who are competent and healthy.

(2) I thought of an idealized person.

(3) I chose my answers relative to what I know of myself in the areas mentioned.

(4) I thought of an unhealthy person or persons and described what would be an improved mental state for them.

(5) None of the above. (In this case please describe your process below and include this page with your answer sheet.)